

BOBBY JINDAL
GOVERNOR



HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana
DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Certified Mail No.

Mr. D. Frank Willsdon
General Manager
Shell Norco Chemical Plant-East Site, Shell Chemical LP
P. O. Box 10
Norco, Louisiana 70079

Agency Interest No. 26336
Activity No. PER20090002

RE: Operating permit modification, Butadiene Recovery Plant, Gasoline Hydrotreater, Gasoline Olefins Plant, and Olefins Plant, Shell Norco Chemical Plant-East Site, Shell Chemical LP, Norco, St. Charles Parish, Louisiana

Dear Mr. Willsdon:

This is to inform you that the permit modification for the above referenced facility has been approved under LAC 33:III.501. The submittal was approved on the basis of the application submitted and the approval in no way relieves the applicant of the obligation to comply with all the applicable requirements.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the 13th of March, 2009, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number cited below and the AI number should be referenced in future correspondence regarding this facility.

Done this _____ day of _____, 2009.

Permit No.: 2520-V3

Sincerely,

meed

Cl
As
Public Notice

SG
c: S
US LRA Region VI

**AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

I. BACKGROUND

Shell Oil Company owns and Shell Norco Refining Company operates Shell Norco Chemical Plant-East Site under various State Permit Numbers 2283-V2 dated January 8, 2009; 2520-V2 dated October 23, 2001; 2840-V0 dated May 30, 2003; and 3047-V1 dated December 5, 2007. This permit deals with all the emission points associated with the Butadiene Recovery, Gasoline Hydrotreater, and Olefins Plants under Part 70 Operating Permit No. 2520-V2.

II. ORIGIN

A permit modification request and Emission Inventory Questionnaire (EIQ) dated January 26, 2009, were submitted requesting a minor modification. Additional information was also submitted as of February 3, 2009.

III. DESCRIPTION

Shell Norco Chemical Plant-East Site manufactures petrochemical products from light heavy hydrocarbon feedstocks. Products include ethylene, propylene, finished butadiene, pyrolysis gasoline, residuals, and gasoline blending components.

This permit includes butadiene recovery unit (BD-5), gasoline hydrotreater (GHT), gasoline olefins plant (GO-1), and olefins plant (OL-5).

Gasoline Olefins Plant No. 1 (GO-1): This is a light hydrocarbon feed pyrolysis unit which produces ethylene, propylene, butadiene, hydrogen, and pyrolysis gasoline.

The main sections of the plant include pyrolysis, quench, compression, treating, drying, fractionation, and refrigeration. Gas and light liquid feeds are thermally cracked in furnaces to produce olefins. Streams from the pyrolysis section then enter the quench/separation section where they undergo primary fractionation to produce lighter and heavy gasoline and fuel oil. The process gases are compressed and passed through a caustic treater to remove acid gases. Spent caustic is oxidized and the bottoms from the caustic oxidizer are used for pH control and tops are used as fuel in the furnaces. The process gases are then chilled and passed through a light fractionation section to produce various light products and a purified hydrogen stream which is used at other units.

Olefins Plant No. 5 (OL-5): Olefins Plant is also a light and heavy hydrocarbon feed pyrolysis unit which produces ethylene, butadiene, hydrogen, and pyrolysis gasoline.

**AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

The main sections of this plant include pyrolysis, quench, compression, treating, drying, refrigeration, and fractionation. Gas and light liquid feeds are thermally cracked in furnaces to produce olefins. Streams from the pyrolysis section enter the quench/ separation section where they undergo primary fractionation. A rough separation is done to yield process gas, pyrolysis gasoline, cracked light gas oil, cracked heavy gas oil, and residue. The process gases are then compressed and treated in the DEA system followed by a caustic scrubber to remove acid gases. Spent caustic is routed to the caustic oxidizer for recovery. After the final compression, the process gases pass through dryers and chillers and are fractionated to produce various light products and two purified hydrogen streams which are used at other units.

Butadiene Recovery Unit (BD-5): Crude butadiene streams from OL-5 and GO-1 are combined and fed with imported butadiene to the unit. This unit consists of five sections: extractive distillation, solvent stripping, butadiene finishing, solvent recovery, and butylene/butanes hydrogenation.

Crude butadiene is fed to the extractive distillation column where it contacts with a solvent mixture to ease separation from butylene and butane. Butadiene is recovered from the bottoms in the stripper section and heavy ends are removed in the fractionation section. Recovered butadiene is piped to the finishing section.

In the butylene/butanes hydrogenation section the butylene/butanes stream is selectively hydrogenated over a catalyst to make the stream suitable for further processing in the refinery or for sales.

Gasoline Hydrotreater (GHT): Pyrolysis gasoline from GO-1 and OL-5 and imported pyrolysis gasoline is fed to this hydrotreater to remove dienes, acetylenes, styrene, and sulfur compounds. The unit also separates hydrotreated pyrolysis gasoline into benzene concentrate, an unhydrotreated C₅ stream, and heavy gasoline products. This unit consists of two catalytic stages. The first stage removes dienes, acetylenes, and styrene compounds. The second stage removes sulfur and olefins compounds from the benzene concentrate.

Shell Norco Chemical Plant-East Site proposes to change the service for Tanks F-496, F-497 and F-499 (Emission Points 1250-95, 1251-95, and 1001-94) and remove Tanks F-498, F-500 and F-501 (Emission Points 1211-95, 1212-95, and 1213-95) which are permitted under a CAP, Emission Point 5005-97. The CAP will now have only three tanks, F-496, F-497, and F-499. Tanks F-498 and F-500 will be permitted as individual point sources. Additionally, Tank F-501 will be removed from service as part of this permit action. Furthermore, Tanks F-483 and F-494

**AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

(Emission Points 1243-95 and 1244-95) will undergo a tank change of service. Finally tank F-433 (Emission Point 1240-95) will be removed from service as part of the permit action. The overall VOC emissions of the CAP will decrease from 396.56 to 101.18 tons per year due to the change of tank service but the emissions of 1,3-Butadiene (speciated) will increase above its minimum emission rate. The LDEQ performed a SCREEN 3 modeling analysis which determined that the annual concentration for 1,3-Butadiene was determined to be 0.43 ug/m³ which is lower than the Ambient Air Standard (AAS) of 0.92 ug/m³ for 1,3-Butadiene.

To achieve this change the facility will also install associated piping and fugitive components.

Total permitted emissions from the BD, GHT, GO, and OL Plants based on the above referenced changes in tons per year are as follows:

POLLUTANT	BEFORE	AFTER	CHANGE
PM10	432.08	432.08	-
SO2	473.73	473.73	-
NOx	9942.15	9942.15	-
CO	945.35	945.35	-
VOC	2696.87	2418.81	- 278.06

The OL-5, GO-1, and BD-5 units of the Shell Norco Chemical Plant-East Site are classified under ASOCMI and the GHT unit is classified under APetroleum Refineries. Standards are established for these facilities in New Source Performance Standards (NSPS); 40 CFR 60; Subpart J- Standards of Performance for Petroleum Refineries; Subpart GGG- Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries; Subpart NNN-Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations; Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater System; Subpart RRR-Standards of Performance for Volatile Organic Compound Emissions from SOCMI Reactor Processes; and National Emission Standards For Hazardous Air Pollutants (NESHAP) for Source Categories; 40 CFR 63; Subpart F-National Emission Standards for Organic Hazardous Air Pollutants From the SOCMI; Subpart G-National Emission Standards for Organic Hazardous Air Pollutants From the SOCMI for Process Vents, Storage Vessels, Transfer Operations, and Wastewater; Subpart H-National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks; Subpart CC - National Emission Standards

**AIR PERMIT BRIEFING SHEET
AIR PERMITS DIVISION
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

for Hazardous Air Pollutants From Petroleum Refineries. Shell Norco-East Site as a whole is a major source of toxic air pollutants and must comply with all applicable provisions of LAC 33:III.Chapter 51 - Comprehensive Toxics Air Pollutant Emission Control Program. Due to new fugitive components associated with the olefins debottlenecking project Shell will meet the MACT requirements and shall report annual emissions per LAC 33:III.5107. Shell Norco-East Site as a whole shall comply with all the applicable provisions of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61, Subpart FF - National Emission Standard for Benzene Waste Operations. Shell is also subject to all the applicable provisions of Louisiana Refinery MACT Determination dated July 26, 1994, except as noted in State Specific Condition No. 1. This permit incorporates all the applicable limits and operating conditions from all the current permits under which the existing units are operating and also addresses any new limits or operating conditions applicable.

IV. TYPE OF REVIEW

This application was reviewed for compliance with the Louisiana Part 70 operating permit program, the Louisiana Air Quality Regulations, New Source Performance Standards, and NESHAP. Prevention of Significant Deterioration does not apply.

Shell Norco Chemical Plant-East Site is a major source of toxic air pollutants. The air toxic compliance plan was approved January 8, 1996.

V. PUBLIC NOTICE

A notice requesting public comment on the permit based on the increase of toxic air pollutant, 1,3-Butadiene, above its minimum emission rate as per the requirements of LAC 33 III.5107.D was published in The Advocate, Baton Rouge, Louisiana and St. Charles Herald-Guide, Louisiana, on **** **, 2009. Written and oral comments received during the comment period from the general public and organizations will be considered before issuing the permit. Copies of the public notice were mailed out to individuals on the mailing list maintained by Office of Environmental Services on ***** **, 2009. The proposed permit was sent to U.S. EPA via e-mail on ***** **, 2009. All comments received shall be considered before an action is taken on this proposed permit.

PART 70 SPECIFIC CONDITIONS

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

This permit is issued under the following conditions:

The permittee shall comply with all applicable requirements listed in the attached tables. Failure to comply with any of the federal applicable requirements or compliance monitoring devices, activities, or methods listed in Tables 1, 2, 3, and 4 will represent a violation of this permit.

1. Permittee shall comply with all the applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries.
2. Permittee shall comply with all the applicable provisions of 40 CFR 60, Subpart QQQ - Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater System.
3. Permittee shall comply with all the applicable provisions of National Emission Standards For Hazardous Air Pollutants For Source Categories, 40 CFR 63, Subpart CC - National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries.
4. Permittee shall comply with all applicable provisions of National Emission Standards For Hazardous Air Pollutants, 40 CFR 61, Subpart FF - National Emission Standards for Benzene Waste Operations.
5. Permittee shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart J - Standards of Performance for Petroleum Refineries.
6. Storage Tanks F-495, F-483, and B-484, Emission Points 3-95, 1243-95, and 1055-95, shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.
7. Storage tanks F-494 and H-438 (Emission Points 1244-95 and 1066-95) shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart K-Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.
8. Storage tanks F-502, F-509, F-499, B-482, and B-483 (Emission Points 1252-95, 1002-95, 1001-94, 1032-95, and 1033-95) shall comply with all applicable provisions of New Source Performance Standards, 40 CFR 60, Subpart Ka-Standards of Performance for Storage

PART 70 SPECIFIC CONDITIONS

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

9. Permittee shall comply with all applicable provisions of National Emission Standards For Hazardous Air Pollutants for Source Categories, 40 CFR 63, Subpart Y - National Emission Standards for Marine Tank Vessel Loading Operations.
10. Permittee shall comply with all applicable provisions of National Emission Standards For Hazardous Air Pollutants, 40 CFR 61, Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene.
11. Permittee shall comply with all applicable provisions of National Emission Standards For Hazardous Air Pollutants, 40 CFR 61, Subpart V - National Emission Standard for Equipment Leaks (Fugitive Emission Sources).
12. Permittee shall show compliance with the limits of this permit by maintaining the total overall calculated VOC emissions (cap) from olefins feed tanks cap, (5005-97) to not more than 101.18 TPY. The overall emissions shall be calculated based on the throughput and recorded each month, as well as the VOC emissions calculated for the last twelve months. These records shall be kept on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. Total overall calculated emissions of the caps above the maximum listed in this specific condition for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division.

A report showing the calculated VOC emissions on the basis of throughput from this cap for the last twelve months shall be submitted to the Office of Environmental Services by February

13. Permittee shall comply with all the applicable provisions of National Emission Standards For Hazardous Air Pollutants For Source Categories, 40 CFR 63, Subpart F - National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry.
14. Permittee shall comply with all the applicable provisions of National Emission Standards For Hazardous Air Pollutants For Source Categories, 40 CFR 63, Subpart G - National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater.
15. Permittee shall comply with all the applicable provisions of National Emission Standards For

PART 70 SPECIFIC CONDITIONS

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Hazardous Air Pollutants for Source Categories, 40 CFR 63, Subpart H - National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.

16. To ensure compliance with permitted emission limits, a stack test shall be performed on the New Furnace GO-1, Emission Point 5004-95. The following test methods and procedures from New Source Performance Standards, 40 CFR 60, Appendix A, shall be used:

- a. NO_x by Method 7E-Determination of Nitrogen Oxides Emissions from Stationary Sources.
- b. Carbon Monoxide by method 10-Determination of Carbon Monoxide Emissions from Stationary Sources.
- c. Particulates by Method 5-Determination of Particulate Emissions from Stationary Sources.
- d. Opacity by Method 9-Visual Determination of Opacity of Emissions from Stationary Sources.
- e. SO₂ by Method 6-Determination of Sulfur Dioxide Emissions from Stationary Sources.

The NO_x test shall be conducted first. Once the steam/fuel ratio has been established to minimize the NO_x concentration, subsequent testing for carbon monoxide, particulates and opacity shall be done using this ratio.

17. Permittee shall demonstrate compliance with the opacity and PM₁₀ emissions limit of this permit by visually inspecting heaters, and furnaces, Emission Points 1-73 thru 9-73, 7-76, 9-76, 10-76 thru 20-76, 2-95, and 5004-97, for opacity on a weekly basis. If visible emissions are detected, then, within three (3) working days, the permittee shall conduct a six minute opacity reading in accordance with EPA Reference Method 9. Records of opacity checks - including data and time of the check, observed emission unit ID, operational status on the emission unit, observed results and conclusion, and any Method 9 or 22 results, shall be kept on site and available for inspection by the Air Quality Division.
18. Permittee shall comply with all the provisions of 40 CFR 60, Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

STATE ONLY SPECIFIC CONDITIONS

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Failure to comply with the following conditions and any of the state's applicable requirements listed in Table 1, 2, 3, and 4 will represent a violation of this permit.

1. To meet the MACT requirements of LAC 33:III.5109 for fugitive emissions, the facility shall comply with the requirements of the Louisiana MACT Determination for Refinery Equipment Leaks (LDREL) dated July 26, 1994, except as noted below:
 - A. As an alternative to the requirements of LDREL, the facility shall monitor valves and pumps in VOC service at the current leak detection limits of 500 ppm for valves and 10,000 ppm for pumps per the requirements of 40 CFR 60, Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries and LAC 33:III.2121 - Fugitive Emission Control.
 - B. Connectors will be monitored to detect leaks by the method specified in Section P with the exception that the leak definition and associated calibration of the detection instrument will be based on 500 ppmv, not 1,000 ppmv.
 - C. Facility shall randomly select connectors by monitoring every nth connector in relation to an identified piece of equipment with "n" varying for subsequent monitoring periods.
 - D. A connector is in VOTAP service if a piece of equipment either contains or contacts a volatile fluid (liquid or gas) that is at least 10% or more of the sum of all Class I, II, and III organic toxic air pollutants.
 - E. LDREL Section O.2 is not applicable. Instead of tracking connectors monitored to ensure that at least 75% have not been already monitored, statistical methods used in the random selection of connectors will be used.
 - F. LDREL Section O.8 will be complied with by pressure testing connectors that have been opened or had the seal broken prior to returning to service instead of monitoring during the next monitoring period.
 - G. All documentation requirements will be done as part of the existing LDAR program(s) recordkeeping requirements instead through a parallel and separate LDAR program.
 - H. LDREL Section Q.5 and Q.8 are not applicable. The total number of connectors shall not be required to be recorded in a log.

STATE ONLY SPECIFIC CONDITIONS

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS
PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

2. Permittee shall install guide pole controls on tanks F-433, F-483, F-496, F-498, F-499, F-500, F-501, and F-502 (Emission Points 1240-95, 1243-95, 1250-95, 1211-95, 1001-94, 1212-95, 1213-95, and 1252-95) per the Air Toxics Compliance Plan dated January 8, 1996.
3. Seal systems for tanks F-433 in GO-1; K-493 and K-494 in BD-5; and F-495 (Emission Points 1240-95, 1200-95, 1201-95, and 3-95) shall be upgraded per Air Toxics Compliance Plan dated January 8, 1996.
4. Fugitive emissions of VOC shall be controlled by a monitoring program confirming to the Louisiana Refinery MACT.

The number of each type of component required to be monitored for each monitoring period under the applicable leak definition and repair programs shall be reported to the Department by inclusion with each periodic monitoring report. Fugitive emission piping components may be added to or removed from the permitted units, without triggering the need to apply for a permit modification, provided:

- A Changes in components involve routine maintenance or are undertaken to address safety concerns, or involve small piping revisions with no associated emissions increases except from the fugitive emissions components themselves;
- B. The changes do not involve any associated increases in production rate or capacity, or tie in of new modified process equipment other than the piping components;
- C. Actual emissions following the changes will not exceed the emission limits contained in this permit, and;
- D. The components are promptly incorporated into any applicable LDAR program.

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
 PLANT
 SHELL NORCO CHEMICAL PLANT - EAST SITE
 SHELL NORCO REFINING COMPANY
 NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter									40 CFR 68 and 82
			9	11	13	15	17	21	37	51	56	
1001-95	F-491	Internal Floating Roof Tank						X		X	X	
1002-95	F-509	External Floating Roof Tank										X
1005-95	B-479	Fixed Roof Tank										X
1252-95	F-502	External Floating Roof Tank					X					X
3-95	F-495	External Floating Roof Tank					X					X
3005-95	GHT-FUG	Gasoline Hydrotreater (GHT) Fugitive Emissions				X						X
3205-95	GHT-WW	GHT Unit Wastewater Emissions										X
5-95	Fugitives	GHT Unit Restart Project Fugitives					X					X
1-73	F-126	Pyrolysis Heater F-126 Gasoline Olefins Plant (GO-	X	X	X							O
10-73	PV-1634	Converter Regeneration Knockout										
2-73	F-127	Pyrolysis Heater F-127 Gasoline Olefins Plant	X	X	X							O
3-73	F-128	Pyrolysis Heater F-128 Gasoline Olefins Plant	X	X	X							O
4-73	F-129	Pyrolysis Heater F-129 Gasoline Olefins Plant	X	X	X							O
5-73	F-130	Pyrolysis Heater F-130 Gasoline Olefins Plant	X	X	X							O
6-73	F-131	Pyrolysis Heater F-131 Gasoline Olefins Plant	X	X	X							O

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter								40 CFR		
			9	11	13	15	17	21	37	51	56	59	68 and 82
7-73	F-132	Pyrolysis Heater F-132 Gasoline Olefins Plant		X	X	X							
8-73	F-133	Pyrolysis Heater F-133 Gasoline Olefins Plant		X	X	X					O	O	
9-73	F-134	Pyrolysis Heater F-134 Gasoline Olefins Plant		X	X	X					O	O	
1008-95	K-467	Fixed Roof Tank									X		
1018-95	B-480	Fixed Roof Tank									X		
1052-95	K-462	Fixed Roof Tank								X	X		
1076-95	B-478	Fixed Roof Tank											
1077-95	M-420	Fixed Roof Tank											
1090-95	W-413	Fixed Roof Tank											
1099-95	PV-274	Fixed Roof Tank											
1105-95	PV-1666	Fixed Roof Tank											
1264-95	K-478	Internal Floating Roof Tank								X	X		
2003-95	CWT-06	Cooling Water Tower CWT-06 Gasoline Olefins Plant								X			

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter									40 CFR	
			9	11	13	15	17	21	37	51	56	59	
2004-95	CWT-07	Cooling Water Tower CWT-07 Gasoline Olefins Plant											X
3006-95	GO-1-FUG	Fugitive Emissions								X	X		
3110-95	GO-1S-OWS	Oil Water Separator Gasoline Olefins Plant						O	X	X			
3206-95	GO-1-VWW	Gasoline Olefins Plant Unit Wastewater Emissions								X			
1-96	K-455	Fixed Roof Tank								X			
5004-97	New Furnace	New Gasoline Olefins Plant Furnace	X	X	X					O			
-	C3=Vent	C3=Vent						X					
-	PV-1591	Caustic Degassing Vent, CO ₂ /H ₂ S								X			
-	PV-1633	Caustic Wash/Gas Separator Vent, CO ₂ /H ₂ S								X			
10-76	F-144	Pyrolysis Furnace, F-144, Olefins Plant (OL-5)	X	X	X					O			
11-76	F-145	Pyrolysis Furnace, F-145 Olefins Plant	X	X	X					O			
12-76	F-146	Pyrolysis Furnace, F-146 Olefins Plant	X	X	X					O			
13-76	F-147	Pyrolysis Furnace, F-147 Olefins Plant	X	X	X					O			
14-76	F-148	Pyrolysis Furnace, F-148 Olefins Plant	X	X	X					O			

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter										40 CFR
			9	11	13	15	17	21	37	51	56	59	
15-76	F-149	Pyrolysis Furnace, F-149 Olefins Plant	X	X	X	X	X					O	
16-76	F-150	Pyrolysis Furnace, F-150 Olefins Plant	X	X	X	X	X					O	
17-76	F-151	Pyrolysis Furnace, F-151 Olefins Plant	X	X	X	X	X					O	
18-76	F-152	Pyrolysis Furnace, F-152 Olefins Plant	X	X	X	X	X					O	
19-76	F-153	Pyrolysis Furnace, F-153 Olefins Plant	X	X	X	X	X					O	
20-76	F-154	Pyrolysis Furnace, F-154 Olefins Plant	X	X	X	X	X					O	
7-76	F-141	Pyrolysis Furnace, F-141 Olefins Plant	X	X	X	X	X					O	
9-76	F-143	Pyrolysis Furnace, F-143 Olefins Plant	X	X	X	X	X					O	
6-84	FE-101	Olefins Plant Unit Elevated Flare	X	X	X	X	X					O	
7-84	FG-101	Olefins Plant Unit Ground Flare	X	X	X	X	X					O	
1001-94	F-499	External Floating Roof Tank						X				X	
1012-95	K-498	Fixed Roof Tank										X	
1032-95	B-482	Fixed Roof Tank										X	
1033-95	B-483	Fixed Roof Tank										X	
1039-95	K-501	Fixed Roof Tank										X	

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter										40 CFR
			9	11	13	15	17	21	37	51	56	59	
1055-95	B-484	Internal Floating Roof Tank						X					
1060-95	K-500	Fixed Roof Tank											
1061-95	F-431	Fixed Roof Tank											
1062-95	F-434	Fixed Roof Tank											
1063-95	F-435	Fixed Roof Tank											
1064-95	H-432	Fixed Roof Tank											
1065-95	H-433	Fixed Roof Tank											
1066-95	H-438	Fixed Roof Tank											
1078-95	M-421	Fixed Roof Tank											
1084-95	K-509	Fixed Roof Tank											
1085-95	K-510	Fixed Roof Tank											
1093-95	W-433	Fixed Roof Tank											
1250-95	F-496	External Floating Roof Tank											
1251-95	F-497	External Floating Roof Tank											
2-95	F-140	Ethylene Furnace, F-140 Olefins Plant	X	X	X					O			

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	LAC 33:III Chapter								40 CFR	
			9	11	13	15	17	21	37	51	56	
3007-95	OL-5-FUG	Fugitive Emissions						X		X		
3108-95	OL-5-CPIL	Oil Water Separator Olefins Plant						O		X		
3109-95	OL-5-CPIH	Oil Water Separator Olefins Plant						O		X		
3207-95	OL-5-WW	Olefins Plant-5 Unit Wastewater (WW) Emissions							X			
1003-95	K-495	Internal Floating Roof Tank								X		
1101-95	K-489	Fixed Roof Tank								X		
1200-95	K-493	Internal Floating Roof Tank								X		
1201-95	K-494	Internal Floating Roof Tank								X		
2005-95	CWT-09	Cooling Water Tower CWT-09 (BD-5, OL-5, OFH, GHT)								X		
3001-95	BD-5-FUG	Fugitive Emissions - Butadiene Uni No.5							X		X	
3204-95	BD-5-WW	BD-5 Unit Wastewater Emissions										
	BD-5 MAINTENANC	Maintenance Wastewater										
Facility Wide		Facility Wide								X	X	X

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60														
			A	D	Db	Dc	E	J	K	Ka	Kb	G	V	X	G	I	N
1001-95	F-491	Internal Floating Roof Tank															
1002-95	F-509	External Floating Roof Tank															
1005-95	B-479	Fixed Roof Tank															
1252-95	F-502	External Floating Roof Tank															
3-95	F-495	External Floating Roof Tank															
3005-95	GHT-FUG	Fugitive Emissions															
3205-95	GHT-WW	GHT Unit Wastewater Emissions															
5-95	Fugitives	GHT Unit Restart Project Fugitives															
1-73	F-126	Pyrolysis Heater F-126 Gasoline Olefins Plant															
10-73	PV-1634	Converter Regeneration Knockout															
2-73	F-127	Pyrolysis Heater F-127 Gasoline Olefins Plant															

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60												NSPS 40 CFR 60			
			A	D	Db	Dc	E	J	K	Ka	Kb	G	V	X	G	I	N	Q
3-73	F-128	Pyrolysis Heater F-128 Gasoline Olefins Plant																
4-73	F-129	Pyrolysis Heater F-129 Gasoline Olefins Plant																
5-73	F-130	Pyrolysis Heater F-130 Gasoline Olefins Plant																
6-73	F-131	Pyrolysis Heater F-131 Gasoline Olefins Plant																
7-73	F-132	Pyrolysis Heater F-132 Gasoline Olefins Plant																
8-73	F-133	Pyrolysis Heater F-133 Gasoline Olefins Plant																
9-73	F-134	Pyrolysis Heater F-134 Gasoline Olefins Plant																
1008-95	K-467	Fixed Roof Tank																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60												NSPS 40 CFR 60	NSPS 40 CFR 60	NSPS 40 CFR 60	
			A	D	D _b	D _c	E	J	K	K _a	K _b	G	V	X	G	I	N	Q
1018-95	B-480	Fixed Roof Tank																
1052-95	K-462	Fixed Roof Tank																
1076-95	B-478	Fixed Roof Tank																
1077-95	M-420	Fixed Roof Tank																
1090-95	W-413	Fixed Roof Tank																
1099-95	PV-274	Fixed Roof Tank																
1105-95	PV-1666	Fixed Roof Tank																
1264-95	K-478	Internal Floating Roof Tank																
2003-95	CWT-06	Cooling Water Tower CWT-06 (GO-1)																
2004-95	CWT-07	Cooling Water Tower CWT-07 (GO-1)																
3006-95	GO-1-FUG	Fugitive Emissions																
3110-95	GO-1S-OWS	Oil Water Separator (GO-1) South																
3206-95	GO-1-WW	GO-1 Unit Wastewater (WW)																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60															
			A	D	Db	Dc	E	J	K	Ka	Kb	G	V	X	G	I	N	Q
1-96	K-455	Fixed Roof Tank																
5004-97	New Furnace	New GO-1 Furnace																
-	C3=Vent	C3=Vent																
-	PV-1591	Caustic Degassing Vent, CO ₂ /H ₂ S																
-	PV-1633	Caustic Wash/Gas Separator																
10-76	F-144	Pyrolysis Furnace, F-144 (OL-5)																
11-76	F-145	Pyrolysis Furnace, F-145 (OL-5)																
12-76	F-146	Pyrolysis Furnace, F-146 (OL-5)																
13-76	F-147	Pyrolysis Furnace, F-147 (OL-5)																
14-76	F-148	Pyrolysis Furnace, F-148 (OL-5)																
15-76	F-149	Pyrolysis Furnace, F-149 (OL-5)																
16-76	F-150	Pyrolysis Furnace, F-150 (OL-5)																
17-76	F-151	Pyrolysis Furnace, F-151 (OL-5)																
18-76	F-152	Pyrolysis Furnace, F-152 (OL-5)																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60															
			A	D	Db	Dc	E	J	K	Ka	Kb	G	V	X	G	-	N	Q
19-76	F-153	Pyrolysis Furnace, F-153 (OL-5)																
20-76	F-154	Pyrolysis Furnace, F-154 (OL-5)																
7-76	F-141	Pyrolysis Furnace, F-141 (OL-5)																
9-76	F-143	Pyrolysis Furnace, F-143 (OL-5)																
6-84	FE-101	OL-5 Unit Elevated Flare (FE-101)																
7-84	FG-101	OL-5 Unit Ground Flare (FG-101)																
1001-94	F-499	External Floating Roof Tank																
1012-95	K-498	Fixed Roof Tank																
1032-95	B-482	Fixed Roof Tank																
1033-95	B-483	Fixed Roof Tank																
1039-95	K-501	Fixed Roof Tank																
1055-95	B-484	Internal Floating Roof Tank																
1060-95	K-500	Fixed Roof Tank																
1061-95	F-431	Fixed Roof Tank																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60															
			A	D	D _b	D _c	E	J	K	K _a	K _b	G	V	X	G	-	N	Q
1062-95	F-434	Fixed Roof Tank																
1063-95	F-435	Fixed Roof Tank																
1064-95	H-432	Fixed Roof Tank																
1065-95	H-433	Fixed Roof Tank																
1066-95	H-438	Fixed Roof Tank																
1078-95	M-421	Fixed Roof Tank																
1084-95	K-509	Fixed Roof Tank																
1085-95	K-510	Fixed Roof Tank																
1093-95	W-433	Fixed Roof Tank																
1250-95	F-496	External Floating Roof Tank																
1251-95	F-497	External Floating Roof Tank																
2-95	F-140	Ethylene Furnace F-140 (OL-5)X																
3007-95	OL-5-FUG	Fugitive Emissions																
3108-95	OL-5-CPIL	Oil Water Separator OL-5																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NSPS 40 CFR 60															
			A	D	Db	Dc	E	J	K	Ka	Kb	G	V	X	G	I	N	Q
3109-95	OL-5-CPIH CPIHOWS	Oil Water Separator OL-5																
3207-95	OL-5-VWW	OL-5 Unit Wastewater Emissions																
1003-95	K-495	Internal Floating Roof Tank																
1101-95	K-489	Fixed Roof Tank																
1200-95	K-493	Internal Floating Roof Tank																
1201-95	K-494	Internal Floating Roof Tank																
2005-95	CWT-09	CWT-09 BD-5, OL-5, OFH, GHT																
3001-95	BD-5-FUG	Fugitive Emissions - Butadiene Unit No.5																
3204-95	BD-5-WW	BD-5 Unit Wastewater Emissions																
-	BD-5 MAINT. WW	Maintenance Wastewater																
		Facility Wide																

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	BB	E	A	F	G	H	Q	R	W	Y
1001-95	F-491	Internal Floating Roof Tank														X
1002-95	F-509	External Floating Roof Tank														X
1005-95	B-479	Fixed Roof Tank														X
1252-95	F-502	External Floating Roof Tank														X
3-95	F-495	External Floating Roof Tank														X
3005-95	GHT-FUG	Fugitive Emissions							X	X						X
3205-95	GHT-WW	GHT Unit Wastewater Emissions							X							X
5-95	Fugitives	GHT Unit Restart Project Fugitives			X	X										X
1-73	F-126	Pyrolysis Heater F-126 Gasoline Olefins Plant														
10-73	PV-1634	Converter Regeneration Knockout														
2-73	F-127	Pyrolysis Heater F-127 Gasoline Olefins Plant														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

ELQ SOURCE ID	SHELL EQUIP. ID	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	Y	BB	F	A	F	G	H	Q	R	W
3-73	F-128	Pyrolysis Heater F-128 Gasoline Olefins Plant														
4-73	F-129	Pyrolysis Heater F-129 Gasoline Olefins Plant														
5-73	F-130	Pyrolysis Heater F-130 Gasoline Olefins Plant														
6-73	F-131	Pyrolysis Heater F-131 Gasoline Olefins Plant														
7-73	F-132	Pyrolysis Heater F-132 Gasoline Olefins Plant														
8-73	F-133	Pyrolysis Heater F-133 Gasoline Olefins Plant														
9-73	F-134	Pyrolysis Heater F-134 Gasoline Olefins Plant														
1008-95	K-467	Fixed Roof Tank														
1018-95	B-480	Fixed Roof Tank														
1052-95	K-462	Fixed Roof Tank														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	Y	BB	F	A	F	G	H	Q	R	W
1076-95	B-478	Fixed Roof Tank														
1077-95	M-420	Fixed Roof Tank														
1090-95	W-413	Fixed Roof Tank														
1099-95	PV-274	Fixed Roof Tank														
1105-95	PV-1666	Fixed Roof Tank														
1264-95	K-478	Internal Floating Roof Tank								X						
2003-95	CWT-06	CWT-06 GO-1South										O				
2004-95	CWT-07	CWT-07 GO-1North										O				
3006-95	GO-1-FUG	Fugitive Emissions								X	X					
3110-951	GO-1S-OWS	OWS GO-1 South API										X				
3206-95	GO-1-WW	GO-1 Unit Wastewater Emissions										X				
1-96	K-455	Fixed Roof Tank											X			
5004-97	New Furnace	New GO-1 Furnace														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	Y	BB	F	A	F	G	H	Q	R	W
-	C3=Vent	C3=Vent														
	PV-1633	Caustic Wash/Gas Separator Vent														
-	PV-1591	Caustic Degassing Vent, CO ₂ /H ₂ S														
10-76	F-144	Pyrolysis Furnace, F-144 (OL-5)														
11-76	F-145	Pyrolysis Furnace, F-145 (OL-5)														
12-76	F-146	Pyrolysis Furnace, F-146 (OL-5)														
13-76	F-147	Pyrolysis Furnace, F-147 (OL-5)														
14-76	F-148	Pyrolysis Furnace, F-148 (OL-5)														
15-76	F-149	Pyrolysis Furnace, F-149 (OL-5)														
16-76	F-150	Pyrolysis Furnace, F-150 (OL-5)														
17-76	F-151	Pyrolysis Furnace, F-151 (OL-5)														
18-76	F-152	Pyrolysis Furnace, F-152 (OL-5)														
19-76	F-153	Pyrolysis Furnace, F-153 (OL-5)														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	Y	BB	F	A	F	G	H	Q	R	W
20-76	F-154	Pyrolysis Furnace, F-154 (OL-5)														
7-76	F-141	Pyrolysis Furnace, F-141 (OL-5)														
9-76	F-143	Pyrolysis Furnace, F-143 (OL-5)														
6-84	FE-101	OL-5 Unit Elevated Flare (FE-101)														
7-84	FG-101	OL-5 Unit Ground Flare (FG-101)														
1001-94	F-499	External Floating Roof Tank														
1012-95	K-498	Fixed Roof Tank														
1032-95	B-482	Fixed Roof Tank														
1033-95	B-483	Fixed Roof Tank														
1039-95	K-501	Fixed Roof Tank														
1055-95	B-484	Internal Floating Roof Tank														
1060-95	K-500	Fixed Roof Tank														
1061-95	F-431	Fixed Roof Tank														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	Y	BB	F	A	F	G	H	Q	R	W
1062-95	F-434	Fixed Roof Tank														
1063-95	F-435	Fixed Roof Tank														
1064-95	H-432	Fixed Roof Tank														
1065-95	H-433	Fixed Roof Tank														
1066-95	H-438	Fixed Roof Tank														
1078-95	M-421	Fixed Roof Tank														
1084-95	K-509	Fixed Roof Tank														X
1085-95	K-510	Fixed Roof Tank														X
1093-95	W-433	Fixed Roof Tank														
1211-95	F-498	External Floating Roof Tank														
1212-95	F-500	External Floating Roof Tank														

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

EIQ SOURCE ID	SHELL EQUIP. ID NO.	SHELL SOURCE NAME	NESHPAP 40 CFR 61						NESHPAP 40 CFR 63							
			A	F	J	V	BB	F	A	F	G	H	Q	R	W	Y
1250-95	F-496	External Floating Roof Tank														X
1251-95	F-497	External Floating Roof Tank														X
2-95	F-140	Ethylene Furnace, F-140 (OL-5)														
3007-95	OL-5-FUG	Fugitive Emissions														
3108-95	OL-5-CPII	OWS OL-5 CPII														
3109-95	OL-5-CPIH	OWS OL-5 CPIH														
3207-95	OL-5-WW	OL-5 Unit Wastewater Emissions														
1003-95	K-495	Internal Floating Roof Tank														
1101-95	K-489	Fixed Roof Tank														
1200-95	K-493	Internal Floating Roof Tank														
1201-95	K-494	Internal Floating Roof Tank														
2005-95	CWT-09	CWT-09 BD-5, OL-5, OFH, GHT													O	
3001-95	BD-5-FUG	Fugitive Emissions - Butadiene Unit													X	

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL NORCO REFINING COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 1: APPLICABLE LOUISIANA AND FEDERAL AIR QUALITY REQUIREMENTS

Key: X - applicable requirement, O - Exemption criteria met, (Blank) - does not apply

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
Facility Wide		Emission Inventory (EI) LAC 33:III.919 State only-Pending Federal Approval	Submit EI by March 31st of each year for the period January 1 st to December 31 st of previous year	
		Notification of Unauthorized Discharges LAC 33:III.927 State Only - Pending Federal Approval	Unauthorized discharge of any air pollutant in to the atmosphere shall reported in accordance with the provisions of LAC 33:1.Chapter 39	
		Housekeeping LAC 33:III.2113	Maintain best practical housekeeping and maintenance practices at the highest possible standards.	
		Prevention of Air Pollution Emergency Episode - LAC 33:III.5609 and 5611	Have standby plans for emissions reduction during emergency episodes	
		Chemical Accident Prevention and Minimization of Consequences LAC 33:III.Chapter 59-State only	Comply with sections 5901, 5911, and 5913 according to the dates specified in LAC 33:III.Chapter 59	
		Chemical Accident Prevention Provisions 40 CFR 68	Comply with all applicable regulations in Part 68 Submit a Risk Management Plan by June 21, 1999	
		NSPS Subpart A - General Provisions 40 CFR 60.1 thru 19	All affected (NSPS) facilities comply with applicable provisions of this subpart	
		NESHAP Subpart A - General Provisions 40 CFR 61.1 thru 19	All affected (NESHAP) stationary sources comply with applicable provisions of this subpart	
		NESHAP for Source Categories - General Provisions 40 CFR 63.1 thru 15	All affected (NESHAP) stationary sources comply with applicable provisions of this subpart	
		Louisiana Toxic Regulations LAC 33:III.5109.B- State only	Impact of TAP emissions on air quality shall be below the Ambient Air Standard(AAS)	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
Facility Wide (Continued)		Toxic Emissions Data Inventory (TEDI) LAC 33:III.5107.A-State only	Submit TEDI by July 1 of each year for the period January 1 st to December 31 st of previous year	
		Protection of Stratospheric Ozone 40 CFR 82 Subpart B and F	Shall comply with all the applicable provisions of 40 CFR 82.30 thru 42, and 150	
		NESHAP; Subpart FF - National Emission Standards for Benzene Waste Operation 40 CFR 61.342	Shall comply with the requirements of 40 CFR 61.357(a)	
	BD-5 40 CFR 63 SOURCES	National Emission Standards for Organic Hazardous Air Pollutants from SOCMI - Subpart F, 40 CFR 63.100.	General standards as well as compliance, reporting, and recordkeeping provisions for sources subject to SOCMI.	Startup Shutdown Malfunction Plans (SSMP) have been developed as of April 22, 1997 for operating and maintaining affected sources during periods of startup, shutdown, and malfunction.
3204-95	BD-5 MAINTENANCE CE WWW	National Emission Standards for Organic Hazardous Air Pollutants from SOCMI - Maintenance Wastewater - Subpart F 40 CFR 63.105.	Prepare and implement description of maintenance management procedures. Maintain records.	
1003-95	K-495	NESHAP(HON), Subpart F and G - SOCMI Storage vessels. 40 CFR 63.100, 119(a)(1) and (e).	Equip Group I storage vessels with an IFR.	Group I storage vessel
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A. State Only	Comply with the requirements of NESHAP (HON) Subpart F and G - 40 CFR 63.100, 119(a)(1) and (e). Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1101-95	K-489	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.
1200-95	K-493	NESHAP(HON), Subpart F and G - SOCMI Storage vessels. 40 CFR 63.100, 119(a)(1) and (e).	Equip Group 1 storage vessels with an IFR.	Group 1 storage vessel
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A. State Only	Comply with the requirements of NESHAP(HON) Subpart F and G - 40 CFR 63.100, 119(a)(1) and (e). Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
1201-95	K-494	NESHAP(HON), Subpart F and G - SOCMI Storage vessels. 40 CFR 63.100, 119(a)(1) and (e).	Equip Group 1 storage vessels with an IFR.	Group 1 storage vessel
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A. State Only	Comply with the requirements of NESHAP(HON) Subpart F and G - 40 CFR 63.100, 119(a)(1) and (e). Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
2005-95	CWT-09	National Emission Standards for Organic Hazardous Air Pollutants from SOCMI - Heat Exchange Systems - Subpart F 40 CFR 63.104	Monthly and quarterly monitoring. Repair leaks and test system.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources (Continued)	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
2005-95	CWT-09	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
		NESHAP for Source Categories, Subpart Q - NESHAP for Industrial Process Cooling Towers 40 CFR 63.402	Does not apply - No water treatment containing chromium of chromium compounds in use	
3001-95	BD-5-FUG	New Source Performance Standards - Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry - Subpart VV 40 CFR 60.482-1 thru 9 National Emission Standards for Organic HAPs for Equipment Leaks - Subpart H 40 CFR 63.160.162 thru 174	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 60.482-1 thru 9. Mark equipment and monitor for leaks. Tag, record, and repair leakers. Maintain records of monitoring program for five years and submit reports.	
		Control of Emissions of Organic Compounds - Pumps and Compressors LAC 33:III.2111	Equip with mechanical seals or equivalent.	Applies to all pumps and compressors.
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Comply with HON (NESHAP) 40 CFR 63 Subparts F and H	SOCMI HON is the approved MACT.
3204-95	BD-5-WW	NESHAP(HON) Subpart F and G for Process Wastewater 40 CFR 63.100, 63.133(a)(2), and 63.139	Comply with waste management unit standards as well as monitoring, inspection, and treatment requirements, as applicable. Keep records and submit reports.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**

SHELL NORCO CHEMICAL PLANT - EAST SITE

SHELL OIL COMPANY

NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3204-95 (Continued)	GHT 40 CFR 63 SOURCES	National Emission Standards for Hazardous Air Pollutants for Source Categories - Subpart A 40 CFR 63.1 thru 15	General performance test, monitoring, notification, recordkeeping, reporting, and control device requirements.	
1001-95	F-491	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	Comply with specified requirements in 40 CFR 63 Subpart G. Comply with the provisions of Group 1 storage vessels. Keep records for five years and submit reports in accordance with the requirements.	
		NSPS, Subpart Kb - Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) 40 CFR 60.110b	Comply with standards for EFR, IFR, or vapor recovery system. Conduct tests, keep records, and submit reports.	
		Storage of Volatile Organic Compounds- LAC 33:III.2103	Equip with an internal floating roof if vapor pressure is less than 11.0 psia. All tank gauging and sampling devices must be gas tight except when conducting gauging or sampling.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
1002-95	F-509	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	Comply with specified requirements in 40 CFR 63 Subpart G. Comply with the provisions of Group 2 storage vessels. Keep records for five years and submit reports in accordance with the requirements.	Group 2 Shall comply with 40 CFR 63.654
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1005-95	B-479	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	Comply with specified requirements in 40 CFR 63 Subpart G. Comply with the provisions of Group 2 storage vessels. Keep records for five years and submit reports in accordance with the requirements.	Group 2 Shall comply with 40 CFR 63.654
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1252-95	F-502	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	
		Storage of Volatile Organic Compounds LAC 33:III.2103	Equip external floating roof tanks with secondary seal as required. Seal closures, devices and covers for openings must comply with requirements specified.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
		National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	Comply with specified requirements in 40 CFR 63 Subpart G. Comply with the provisions of Group 1 storage vessels. Keep records for five years and submit reports in accordance with the requirements.	Group 1 Shall comply with 40 CFR 63.646

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3-95	F-495	NSPS, Subpart Kb - Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) 40 CFR 60.110b	Comply with standards for EFR, IFR, or vapor recovery system. Conduct tests, keep records, and submit reports.	
		National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC, 40 CFR 63.640(c)(6)	Comply with specified requirements in 40 CFR 63 Subpart G. Comply with the provisions of Group 1 storage vessels. Keep records for five years and submit reports in accordance with the requirements.	Group 1 Shall comply with 40 CFR 63.646
		Storage of Volatile Organic Compounds LAC 33:III.2103	Equip external floating roof tanks with secondary seal as required. Seal closures devices and covers for openings must comply with requirements specified.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
3005-95	GHT-FUG	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene - Subpart J 40 CFR 61.110	Shall comply with all the applicable requirements of 40 CFR 61, Subpart V- National Emission Standards for equipment Leaks (Fugitive Emission Sources)	
		National Emission Standards for Equipment Leaks - Subpart V 40 CFR 61.240	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 61.242-(1 thru 11).	A more stringent leaker definition of 500 ppm for valves in light liquid or gas service is followed. Applies to components in VHAP service.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3005-95 (Continued)	GHT-FUG	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.648	Shall comply with the provisions of 40 CFR 63 Subpart H except as provided in 63.648 (c) through (i); existing sources must comply with the provisions of 40 CFR 60 Subpart VV and 63.648 (b) except as provided in 63.648 (a)(1), (a)(2), and (c) through (i).	A more stringent leaker definition of 500 ppm for valves in light liquid or gas service is followed. Applies to components in VOHAP service.
		Control of Emissions of Organic Compounds - Pumps and Compressors LAC 33:III.2111	Equip with mechanical seals or equivalent.	Applies to all pumps and compressors.
		Control of Emissions of Organic Compounds - Fugitive Emission Control LAC 33:III.2121	Comply with control requirements. Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Maintain records and submit reports.	Components which are subject to a more stringent LDAR program are exempt from this regulation [LAC 33:III.2121.C.5].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT is defined by LDAR program in State Only Specific Condition No. 1.
3205-95	GHT-WW	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Manage and treat in accordance with specified standards. Monitor operations and install controls where necessary. Keep records and submit reports. 40 CFR 61.342	Compliance using the BQ6 Program [40 CFR 61.342(e)].
		National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	For Group 1 process wastewater streams, implement specified requirements of 40 CFR 61 Subpart FF except as provided in 63.647(b).	Compliance using the BQ6 Program [40 CFR 61.342(e)].

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3205-95 (Continued)	GHT-WW	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1 Condition No. 1.	LDEQ approved MACT is defined as compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP. Compliance using BQ6 Program [40 CFR 61.342(e)].
5-95	FUGITIVES	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene - Subpart J 40 CFR 61.110	Shall comply with all the applicable requirements of 40 CFR 61, Subpart V- National Emission Standards for equipment Leaks (Fugitive Emission Sources)	
		National Emission Standards for Equipment Leaks - Subpart V 40 CFR 61.240	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 61.242-(1 thru 11).	A more stringent leaker definition of 500 ppm for valves in liquid or gas service is followed. Applies to components in VHAP service.
		National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640	On or before August 18, 1998 - New sources must comply with the provisions of 40 CFR 63 Subpart H except as provided in 63.648 (e) through (l); existing sources must comply with the provisions of 40 CFR 60 Subpart VV and 63.648 (b) except as provided in 63.648 (a)(1), (a)(2), and (e) through (l).	A more stringent leaker definition of 500 ppm for valves in liquid or gas service is followed. Applies to components in VOHAP service.
		Control of Emissions of Organic Compounds - Pumps and Compressors LAC 33:III.2111	Equip with mechanical seals or equivalent.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
S-95 (Continued)	FUGITIVES	Control of Emissions of Organic Compounds - Fugitive Emission Control LAC 33:III.2121	Comply with control requirements. Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Maintain records and submit reports.	Components which are subject to a more stringent LDAR program are exempt from this regulation [LAC 33:III.2121.C.5].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT is defined by LDAR program in State Only Specific Condition No. 1.
Controlled Source	C3=VENT	Control of Emissions of Organic Compounds - Waste Gas Disposal LAC 33:III.2115	Burn nonhalogenated hydrocarbons in direct-flame afterburner, thermal incinerator or other devices that achieve at least 98% removal efficiency or reduce emissions to 20 ppmv. Conduct testing and install monitors as required. Maintain records.	
	GO-1 40 CFR 63 SOURCES	National Emission Standards for Hazardous Air Pollutants for Source Categories - Subpart A 40 CFR 63.1 thru 15	General performance test, monitoring, notification, recordkeeping, reporting, and control device requirements.	
Controlled Source	PV-1591	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.
Controlled Source	PV-1633	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1-73	F-126	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC 33:III.5105.B.3.a.]	
2-73	F-127	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
2-73 (Continued)	F-127	Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A STATE ONLY	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	
3-73	F-128	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	
4-73	F-129	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
4-73 (Continued)	F-129	Particulate Emissions from Fuel Burning Equipment LAC 33:III.13.13	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	
5-73	F-130	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.13.13	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
6-73	F-131	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group I virgin fossil fuel [LAC:33:III.5105.B.3.a].	
7-73	F-132	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources (Continued)	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
7-73	F-132	Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT (LAC 33:III.5109.A)	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].
8-73	F-133	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
9-73	F-134	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
9-73 (Continued)	F-134	Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51. Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	
1008-95	K-467	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1018-95	B-480	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1052-95	K-462	Storage of Volatile Organic Compounds LAC 33:III.2103	Equip storage vessels with either a submerged fill pipe or a vapor control system (VCS) unless the vessel is pressurized. Conduct tests and keep records as specified.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class 1 or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1090-95	W-413	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1099-95	PV-274	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.
1105-95	PV-1666	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.
1264-95	K-478	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Manage and treat in accordance with specified standards. Monitor operations and install controls where necessary. Keep records and submit reports. 40 CFR 61.342	Compliance using the BQ6 Program [40 CFR 61.342(e)].
		Storage of Volatile Organic Compounds LAC 33:III.2103	Equip with an internal floating roof if vapor pressure is less than 11.0 psia. All tank gauging and sampling devices must be gas tight except when conducting gauging or sampling.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
2003-95	CWT-06	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
		NESHAP for Source Categories, Subpart Q - NESHAP for Industrial Process Cooling Towers 40 CFR 63.402	Does not apply - No water treatment containing chromium of chromium compounds in use.	
2004-95	CWT-07	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
		NESHAP for Source Categories, Subpart Q - NESHAP for Industrial Process Cooling Towers 40 CFR 63.402	Does not apply - No water treatment containing chromium of chromium compounds in use	
3006-95	GO-1-FUG	New Source Performance Standards - Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry - Subpart VV 40 CFR 60.480	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 60.482-(1 thru 10).	
		National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene - Subpart J 40 CFR 61.110	Shall comply with all the applicable requirements of 40 CFR 61. Subpart V - National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	
		National Emission Standards for Equipment Leaks - Subpart V 40 CFR 61.240	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 61.242-(1 thru 11).	A more stringent leaker definition of 500 ppm for valves in light liquid or gas service is followed. Applies to components in VHAP service.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3006-95 (Continued)	GO-1-FUG	Control of Emissions of Organic Compounds - Pumps and Compressors LAC 33:III.2111	Equip with mechanical seals or equivalent.	Applies to all pumps and compressors.
		Control of Emissions of Organic Compounds - Fugitive Emission Control LAC 33:III.2121	Comply with control requirements. Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Maintain records and submit reports.	Components which are subject to a more stringent LDAR program are exempt from this regulation [LAC 33:III.2121.C.5].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
3110-95	GO-1S-OWS	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Compliance using the BQ6 Program [40 CFR 61.342(e)]	EXEMPT. Source emits less than 100 TPY of regulated hydrocarbons [LAC 33:III.2109.B.4].
		Oil/Water - Separation LAC 33:III.2109	Equip separator with vapor loss control device. Conduct monthly visual inspections or use test methods. Maintain records.	LDEQ approved MACT is defined as compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP. Compliance using the BQ6 Program [40 CFR 61.342(e)].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3206-95	GO-1-WW	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Compliance using the BQ6 Program [40 CFR 61.342(e)]	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:II.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT is defined as compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP. Compliance using the BQ6 Program [40 CFR 61.342(e)].
1-96	K-455	National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC - 40 CFR 63.640(c)(6)	On or before August 18, 1998 - Comply with specified requirements in 40 CFR 63 Subpart G, except as provided in 63.646 (b) through (m). These provisions state that Group 1 storage vessels shall be equipped with an EFR, IFR or closed vent system/control device based on the contents stored in the vessel. As applicable, comply with emissions averaging or recordkeeping provisions for Group 2 storage vessels. Keep records and submit reports in accordance with requirements.	Group 2 Shall comply with 40 CFR 63.654
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:II.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
5004-97	NEW GO-1 FURNACE	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
5004-97 (Continued)	NEW GO-1 FURNACE	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
	Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313		Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
	Emission Limitations for Other SO ₂ Sources LAC 33:III.1503		Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only		EXEMPT. Source fires Group I virgin fossil fuel [LAC 33:III.5105.B.3.a].	
	OL-5 40 CFR 60 SOURCES	New Source Performance Standards - General Provisions - Subpart A 40 CFR 60.1 thru 19	General recordkeeping, reporting, testing, monitoring, and control device requirements.	
	OL-5 40 CFR 61 SOURCES	National Emission Standards for Hazardous Air Pollutants - Subpart A 40 CFR 61.1 thru 19	General performance testing, monitoring, recordkeeping, and reporting requirements.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
10-76	F-144	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group I virgin fossil fuel [LAC:33.III.5105.B.3.a]	
11-76	F-145	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
11-76 (Continued)	F-145	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
12-76	F-146	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
12-76 (Continued)	F-146	Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas, blended only. The gas analysis record shall be kept on site and updated every six months.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III:Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
13-76	F-147	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dcf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.)	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
13-76 (Continued)	F-147	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.S105.B.3.a].	
14-76	F-148	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR.60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.S105.B.3.a].	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
15-76	F-149	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:II.Chapter 51 Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a]	
16-76	F-150	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
16-76 (Continued)	F-150	Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33 III.5105.B.3.a].	
17-76	F-151	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources (Continued)	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
17-76	F-151	Comprehensive Toxic Air Pollutant Emission Control Program LAC 3:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
18-76	F-152	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 3:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 3:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 3:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 3:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
19-76	F-153	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33.III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33.III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33.III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33.III.Chapter 51 , Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
20-76	F-154	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
20-76 (Continued)	F-154	Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
7-76	F-141	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33:III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
7-76 (Continued)	F-14	Particulate Emissions from Fuel Burning Equipment LAC 33.III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33.III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33.III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
9-76	F-143	New Source Performance Standards - Petroleum Refineries - Subpart J 40 CFR 60.100	Do not fire fuel gas that contains more than 0.10 gr H ₂ S/dscf. Install continuous monitoring systems as required. Conduct performance test, keep records and submit reports 40 CFR 60.104(a)(1).	
		Control of Emissions of Smoke LAC 33.III.1101	Control emissions of smoke so that shade is not darker than 20% average opacity. Maintenance emissions cannot exceed 20% opacity for more than one 6-minute period in any hour.	
		Particulate Emissions from Fuel Burning Equipment LAC 33.III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
9-76 (Continued)	F-143	Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
6-84	FE-101	Control of Emissions of Smoke LAC 33:III.1105	The shade or appearance of the emission does not exceed 20% opacity for a combined total of six hours in any 10 consecutive days.	
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppmv at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33.III.5105.B.3.a].	
7-84	FG-101	New Source Performance Standards - General Provisions - Subpart A (40 CFR 60.1) Control of Emissions of Smoke LAC 33:III.1105	Maintain a two-year log documenting periods of smoking during flaring, when smoking exceeds 5 minutes during any 2 cons. hours, when pilot flame is lost, during S/U and S/D when the flare is used as a control device, and flare downtime during T/A. The shade or appearance of the emission does not exceed 20% opacity for a combined total of six hours in any 10 consecutive days.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
7-84 (Continued)	FG-101	Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC:33:III.5105.B.3.a].	
1001-94	F-499	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	Group 2 storage tank
		Storage of Volatile Organic Compounds LAC 33:III.2103	Equip external floating roof tanks with secondary seal as required. Seal closures devices and covers for openings must comply with requirements specified.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
1012-95	K-498	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	Source does not emit a Class I or II LTAP from Table 51.1. Therefore, no MACT evaluation is required.
1032-95	B-482	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	No Requirements because vapor pressure is less than 1.0 psi.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1032-95 (Continued)	B-482	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1033-95	B-483	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	No Requirements because vapor pressure is less than 1.0 psi.
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1039-95	K-501	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1055-95	B-484	New Source Performance Standards - Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) - Subpart Kb 40 CFR 60.110b	Comply with standards for EFR, IFR, or vapor recovery system. Conduct tests, keep records, and submit reports.	
		Storage of Volatile Organic Compounds LAC 33:III.2103	Equip with an internal floating roof if vapor pressure is less than 1.0 psia. All tank gauging and sampling devices must be gas tight except when conducting gauging or sampling.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1055-95 (Continued)	B-484	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source complies with NSPS Subpart Kb.
1061-95	F-431	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1062-95	F-434	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1063-95	F-435	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1064-95	H-432	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1065-95	H-433	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1066-95	H-438	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart K 40 CFR 60.110	Equip vessels with a floating roof, a vapor recovery system, or equivalent as required. Keep records in accordance with requirements.	No requirements because vapor pressure is less than 1.0 psi.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources (Continued)	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1066-95	H-438	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1084-95	K-509	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	Shall comply with the recordkeeping requirements as vapor pressure is less than 1.0 psi.
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51 Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1085-95	K-510	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	Shall comply with the recordkeeping requirements as vapor pressure is less than 1.0 psi.
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.
1093-95	W-433	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	Shall comply with the recordkeeping requirements as vapor pressure is between 1.0/1.5 psi(40 CFR 60.115a)
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT. This source has no MACT requirements.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
1250-95	F-496	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	
		National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries Subpart CC (40 CFR 63.646(a))	On or before August 18, 1998 - Comply with specified requirements in 40 CFR 63 Subpart G, except as provided in 63.646 (b) through (m). These provisions state that Group 1 storage vessels shall be equipped with an EFR, IFR or closed vent system/control device based on the contents stored in the vessel. As applicable, comply with emissions averaging or recordkeeping provisions for Group 2 storage vessels. Keep records and submit reports in accordance with requirements.	Group 1
		Storage of Volatile Organic Compounds LAC 33.III.2103	Equip external floating roof tanks with secondary seal as required. Seal closures devices and covers for openings must comply with requirements specified.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33.III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	LDEQ approved MACT.
1251-95	F-497	New Source Performance Standards - Petroleum Liquid Storage Vessels - Subpart Ka 40 CFR 60.110a	Comply with standards for EFR, IFR, or vapor recovery system as specified. Conduct tests and keep records in accordance with requirements.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
2-95 (Continued)	F-140	Particulate Emissions from Fuel Burning Equipment LAC 33:III.1313	Limit quantity of PM emitted to < 0.6 lb/MM BTU of heat input. Good combustion practices shall be followed to comply with the limit.	Permittee shall fire refinery fuel gas and other process off gas. The gas analysis record shall be kept on site and updated annually.
		Emission Limitations for Other SO ₂ Sources LAC 33:III.1503	Emissions must not contain concentrations of SO ₂ in excess of 2000 ppm at standard conditions (3-hour avg.) or any applicable NSPS limit.	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	EXEMPT. Source fires Group 1 virgin fossil fuel [LAC 33:III.5105.B.3.a].
3007-95	OL-5-FUG	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene - Subpart J 40 CFR 61.110	Shall comply with all the applicable requirements of 40 CFR 61, Subpart V - National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	
		National Emission Standards for Equipment Leaks - Subpart V 40 CFR 61.240	Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Keep records and submit reports in accordance with requirements 40 CFR 61.242-(1 thru 11).	A more stringent leaker definition of 500 ppm for valves in liquid or gas service is followed. Applies to components in VHAP service.
		Control of Emissions of Organic Compounds - Pumps and Compressors LAC 33:III.2111	Equip with mechanical seals or equivalent.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3007-95 (Continued)	OL-5-FUG	Control of Emissions of Organic Compounds - Fugitive Emission Control LAC 33:III.2121	Comply with control requirements. Monitor equipment for leaks. Tag and record leaking equipment. Repair leaking equipment. Maintain records and submit reports.	Components which are subject to a more stringent LDAR program are exempt from this regulation [LAC 33.III.2121.C.5]
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Control emissions of toxic air pollutant to a degree that constitutes MACT. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
3108-95	OL-5-CPII	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Compliance using the BQ6 Program [40 CFR 61.342(e)].	
		Oil/Water - Separation LAC 33:III.2109	Equip separator with vapor loss control device. Conduct monthly visual inspections or use test methods. Maintain records.	EXEMPT. Source emits less than 100 TPY of regulated hydrocarbons [LAC 33.III.2109.B.4].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	Compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP or Compliance using BQ6 Program [40 CFR 61.342(e)].	
3109-95	OL-5-CPII	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Compliance using the BQ6 Program [40 CFR 61.342(e)].	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS
PLANT**
SHELL NORCO CHEMICAL PLANT - EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 2: STATE AND FEDERAL AIR QUALITY REQUIREMENTS

Emission Sources (Continued)	Equipment ID	Applicable Requirement	Compliance Method/Provision	Notes
3109-95	OL-5-CPIH	Oil/Water - Separation LAC 33:III.2109	Equip separator with vapor loss control device. Conduct monthly visual inspections or use test methods. Maintain records.	EXEMPT. Source emits less than 100 TPY of regulated hydrocarbons [LAC 33.III.2109.B.4].
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	LDEQ approved MACT is defined as compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP. Compliance using BQ6 Program [40 CFR 61.342(e)]. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	
3207-95	OL-5-WW	National Emission Standard for Benzene Waste Operations - Subpart FF 40 CFR 61.340	Compliance using the BQ6 Program [40 CFR 61.342(e)].	
		Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.Chapter 51, Subchapter A State Only	LDEQ approved MACT is defined as compliance with 40 CFR 61 Subpart FF - Benzene Waste NESHAP. Compliance using BQ6 Program [40 CFR 61.342(e)]. Louisiana Refinery MACT Determination Dated July 26, 1994, except as noted in State Only Specific Condition No. 1.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
Facility Wide	Emission Inventory (EI) LAC 33:III.919 - State only	Submit EI by March 31 st each year for the period January 1 st to December 31 st of previous year.	Reporting
Housekeeping LAC 33:III.2113		Maintain plans and records of good housekeeping requirements.	Plans to be kept on site.
LAC 33:III.5107 and 5109 State only		Impact of TAP emissions on air quality shall be below the Ambient Air Standard (AAS). Toxic Emission Data Inventory (TEDI) as per LAC 33:III.5107.A. Retain records for 5 years and submit annual reports by July 1 st .	Recordkeeping and Reporting
Chemical Accident Prevention 40 CFR 68	Chemical Accident Prevention and Minimization of Consequences LAC 33:III.Chapter 59	Submit a Risk Management Plan by June 21, 1999, complying with the requirements of 40 CFR 68 and LAC 33:III.Chapter 59	Reporting
NSPS, Subpart A - General Provisions 40 CFR 60.1 thru 19		Shall install CEMs where appropriate and conduct performance evaluations as per 40 CFR 60.13. Shall comply with all the applicable requirements of 40 CFR 60.18 and 19.	Monitoring, Recordkeeping, and Reporting.
NESHAP, Subpart FF - National Emission Standard for Benzene Waste Operations 40 CFR 61.1, 61.14, 61.354 and 61.357		Maintain records of each waste stream subject to this subpart. Retain records for 5 years. Initial and/or annual and quarterly reports. Shall comply with the requirements of 40 CFR 61.356(a), (b)(4).	Monitoring, Recordkeeping, and Reporting

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
Facility Wide (Continued)	NESHAP, Subpart F - National Emission Standards for Hazardous Air Pollutants for source Categories 40 CFR 63.1, 6 thru 11, and 103	Maintain records of all applicable reports and records required by subpart G and H for five years. All records of start-up, shutdown, and malfunction as per the requirements of 40 CFR 63.103.(c)(2)(ii) and (iii).	Monitoring, Recordkeeping, and Reporting.
1003-95 IFR Tank K-495	NESHAP, Subpart G - Storage Vessel Provisions 40 CFR 63.120, 122, and 123	Inspection for compliance as per 40 CFR 63.120(a)(1) and (3). Maintain records of inspections for at least five years as per 40 CFR 63.123(a) and 123(c). Shall comply with the reporting requirements of 40 CFR 63.122(a)(4), (d)(1)(I), and 152.	Monitoring, Recordkeeping, and Reporting
1101-95 FR Tank K-489	Comprehensive Toxic Air Pollutant emission Control Program LAC 33:III Chapter 51 State Only	Shall comply with the requirements of 40 CFR 63.120, 122, and 123.	Monitoring, Recordkeeping, and Reporting
1200-95 IFR Tank K-493	Comprehensive Toxic Air Pollutant emission Control Program LAC 33:III.Chapter 51 State Only	Shall comply with the requirements of LAC 33:III.2103.1 and any other applicable requirements.	Monitoring, Recordkeeping, and Reporting
	NESHAP, Subpart G - Storage Vessel Provisions 40 CFR 63.120, 122, and 123	Inspection for compliance as per 40 CFR 63.120(a)(1) and (3). Maintain records of inspections for at least five years as per 40 CFR 63.123(a) and 123(c). Shall comply with the reporting requirements of 40 CFR 63.122(a)(4), (d)(1)(I), and 152.	Monitoring, Recordkeeping, and Reporting
	Comprehensive Toxic Air Pollutant emission Control Program LAC 33:III.Chapter 51 State Only	Shall comply with the requirements of 40 CFR 63.120, 122, and 123.	Monitoring, Recordkeeping, and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Method/Provision	Monitoring, Reporting, and Recordkeeping	Notes
I201-95 IFR Tank K-494	NESHAP, Subpart G - Storage Vessel Provisions 40 CFR 63.120, 122, and 123	Inspection for compliance as per 40 CFR 63.120(a)(1) and (3). Maintain records of inspections for at least five years as per 40 CFR 63.123(a) and 123(c). Shall comply with the reporting requirements of 40 CFR 63.122(a)(4), (d)(1)(i), and 152.	Monitoring, Recordkeeping, and Reporting.	
Comprehensive Toxic Air Pollutant emission Control Program LAC 33:III.Chapter 51 State Only		Shall comply with the requirements of 40 CFR 63.120, 122, and 123.	Monitoring, Recordkeeping, and Reporting.	
2005-95 Cooling Water Tower CWT-09	NESHAP, Subpart F - National Emission Standards for Organic Hazardous Air pollutants from SOCMI - Heat Exchange System 40 CFR 63.104(a), (b) and (f)	Shall comply with all the requirements of these sections.	Monitoring, Recordkeeping, and Reporting.	
	Comprehensive Toxic Air Pollutant emission Control Program LAC 33:III.Chapter 51 State Only	Shall comply with all the applicable requirements of NESHAP, Subpart F 40 CFR 63.104	Monitoring, Recordkeeping, and Reporting.	
Fugitive Emissions BD-5 Unit	NSPS, Subpart VV - Equipment Leaks of VOC in the SOCMI 40 CFR 60.486 and 487	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.	
	NESHAP, Subpart H - National Emission Standards for Organic HAPs for Equipment Leaks 40 CFR 181 and 182	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, And Reporting.	
	Comprehensive Toxic Air Pollutant Emission - Control Program LAC 33:III.5107 and 5109 State Only	Compliance with 40 CFR 60.486 and 487, and 40 CFR 63.181 and 182 is considered MACT	Monitoring, Recordkeeping, and Reporting.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
Fugitive Emissions BD-5 Unit (Continued)	Control of Emissions of Organic Compounds - Control Program LAC 33:II.2(2).C and F	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
3204-95 BD-5 Wastewater	NESHAP, Subpart G - National Emission Standards for Hazardous Air Pollutants for Source Categories 40 CFR 63.143 thru 147	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
1001-95 IFR Tank F-491	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 60.115b.	Monitoring, Recordkeeping, and Reporting.
	NSPS, Subpart Kb - Standards of Performance for Storage Vessels (Including Petroleum Liquid Storage Vessels). 40 CFR 60.115b	Shall comply with the requirements of 40 CFR 60.115b, 60.116(b)(a), and (c)	Monitoring, Recordkeeping and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:II.5107 and 5109 State Only.	Compliance with NESHAP, Subpart CC is considered as MACT.		Monitoring, Recordkeeping, and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.I	Shall comply with the requirements of LAC 33:III.2103.I		Monitoring, Recordkeeping, and Reporting.
1002-95 External Floating Roof (EFR) Tank F-509	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 60.115a.	Monitoring, Recordkeeping, and Reporting.
1005-95 Fixed Roof Tank F-479	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 63.654.	Monitoring, Recordkeeping, and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
1252.95 EFR tank F-502	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 63.654.	Monitoring, Recordkeeping, and Reporting.
NSPS, Subpart Kb - Standards of Performance for Storage Vessels (Including Petroleum Liquid Storage Vessels). 40 CFR 60.115b	Shall comply with the requirements of 40 CFR 60.115b, 60.116b(a), and (c)	Monitoring, Recordkeeping and Reporting.	Monitoring, Recordkeeping and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only.	Compliance with NESHAP, Subpart CC is considered as MACT.	Monitoring, Recordkeeping, and Reporting.	Monitoring, Recordkeeping, and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1	Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.	Monitoring, Recordkeeping, and Reporting.
3-95 EFR Tank F-495	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 60.115b.	Monitoring, Recordkeeping, and Reporting.
NSPS, Subpart Kb - Standards of Performance for Storage Vessels (Including Petroleum Liquid Storage Vessels). 40 CFR 60.115b	Shall comply with the requirements of 40 CFR 60.115b, 60.116b(a), and (c)	Monitoring, Recordkeeping and Reporting.	Monitoring, Recordkeeping and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only.	Compliance with NESHAP, Subpart CC is considered as MACT.	Monitoring, Recordkeeping, and Reporting.	Monitoring, Recordkeeping, and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1	Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.	Monitoring, Recordkeeping, and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
3005-95 GHT-FUGITIVES	-National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene Subpart V 40 CFR 61.245 thru 247	Shall comply with all the applicable requirements of these sections. Complying with these sections is also compliance with 40 CFR 61, Subpart J	Monitoring, Recordkeeping, and Reporting.
NESHAP, Subpart CC - National Emission Standards for Hazardous Air pollutants from Petroleum Refineries 40 CFR 63.654	Shall monitor pump seals, valves and other equipment in VOC service and as per Specific Condition No. 1. Shall comply with 40 CFR 63.648(a), 654(d)(1) and (d)(3) thru (d)(6)	Monitoring, Recordkeeping and Reporting.	
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections and the State Only Specific Condition No. 1	Monitoring, Recordkeeping and Reporting.	
Control of Emissions of Organic Compounds - Fugitive emission Control LAC 33:III.2121.C.D, E and F	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.	
5-95 Fugitives	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene Subpart V 40 CFR 61.245 thru 247	Shall comply with all the applicable requirements of these sections. Complying with these sections is also compliance with 40 CFR 61, Subpart J	Monitoring, Recordkeeping, and Reporting.
NESHAP, Subpart CC - National Emission Standards for Hazardous Air pollutants from Petroleum Refineries 40 CFR 63.654	Shall monitor pump seals, valves and other equipment in VOC service and as per Specific Condition No. 1. Shall comply with 40 CFR 63.648(a), 654(d)(1) and (d)(3) thru (d)(6)	Monitoring, Recordkeeping and Reporting.	
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections and the State Only Specific Condition No. 1	Monitoring, Recordkeeping and Reporting.	

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
5-95 Fugitives (Continued)	Control of Emissions of Organic Compounds - Fugitive emission Control LAC 33:III.2121.C, D, E and F	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
3205-95 GHT-Wastewater (WW)	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357 NESHAP, Subpart CC - National Emission Standards for Hazardous Air pollutants from Petroleum Refineries 40 CFR 63.654	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall monitor pump seals, valves and other equipment in VOC service and as per Specific Condition No. 1. Shall comply with 40 CFR 63.648(a), 654(d)(1) and (d)(3) thru (d)(6) Compliance with 40 CFR 61.342(e) is considered as MACT.	Monitoring, Recordkeeping and Reporting.
1-73, 2-73, 3-73, 4-73, 5-73, 6-73, 7-73, 8-73 and 9-73 Pyrolysis Heaters F-126, 127, 128, 129, 130, 131, 132, 133, and 134	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
	Emissions of Particulate Matter LAC 33:III.1313	Shall not emit in excess of 0.6 lb per MM BTU of heat input.	Monitoring, Recordkeeping, and Reporting.
	Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513.	Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
1052-95 FR Tank K-462	Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1	Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
I264-95 IFR Tank K-478	Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.I	Shall comply with the requirements of LAC 33:III.2103.I	Monitoring, Recordkeeping, and Reporting.
	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
3006-95 GO-1-FUG	NSPS, Subpart VV - Equipment Leaks of VOC in the SOCMI 40 CFR 60.486 and 487	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene Subpart V 40 CFR 61.245 thru 247	Shall comply with all the applicable requirements of these sections. Complying with these sections is also compliance with 40 CFR 61, Subpart J	Monitoring, Recordkeeping, and Reporting
	Comprehensive Toxic Air Pollutant Emission - Control Program LAC 33:III.5107 and 5109 State Only	Compliance with 40 CFR 60.486 and 487, and 40 CFR 63.181 and 182 is considered MACT	Monitoring, Recordkeeping, and Reporting.
	Control of Emissions of Organic Compounds - Control Program LAC 33:III.2121.C and F	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
3110-95 GO-1-S-OWS	Oil/Water - Separation LAC 33:III.2109.D	Maintain records for five years and comply with the requirements of this section	Recordkeeping.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
3110-95 GO-1-S-OWS (Continued)	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
3206-95	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
1-96 XE FR Tank K-455	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group 2 Tank - Shall comply with all the applicable requirements of 40 CFR 63.654.	Monitoring, Recordkeeping and Reporting.
5004-97 Pyrolysis Heater F-177 GO-1-S	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
	Emissions of Particulate Matter LAC 33:III.1313	Shall not emit in excess of 0.6 lb per MM BTU of heat input.	Monitoring, Recordkeeping and Reporting.
	Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513	Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NSPS, Subpart J - Petroleum Refineries 40 CFR 60.105, 107 and 108	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
7-76, 9-76, 10-76, 11-76, 12-76, 13-76, 14-76, 15-76, 16-76, 17-76, 18-76, 19-76, and 20-76 Pyrolysis Furnaces F-141, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, and 154	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
Emissions of Particulate Matter LAC 33:II.1313		Shall not emit in excess of 0.6 lb per MM BTU of heat input.	Monitoring, Recordkeeping, and Reporting.
Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513.		Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
NSPS, Subpart J - Petroleum Refineries 40 CFR 60,105, 107 and 108		Shall comply with all the applicable requirements of theses sections.	Monitoring, Recordkeeping, and Reporting.
6-84 OL-5 Elevated Flare FE-101	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513.		Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
NSPS, Subpart A - Performance Standards 40 CFR 60,18 and 19		Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
7-84 Ground Flare FG-101	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513.		Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
7-84 Ground Flare FG-101 (Continued)	NSPS, Subpart A - Performance Standards 40 CFR 60.18 and 19	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
1001-94 EFR Tank F-499	NSPS, Subpart Ka - Petroleum Liquid Storage Vessels 40 CFR 60.113a and 115a	Shall comply with all the applicable requirements of these sections	Monitoring, Recordkeeping, and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1		Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only		Shall comply with all the applicable requirements of these sections. Compliance with 40 CFR 60.110a is considered as MACT.	Monitoring, Recordkeeping and Reporting.
1055-95 IFR Tank B-484	NSPS, Subpart Kb - Standards of Performance for Storage Vessels (Including Petroleum Liquid Storage Vessels) 40 CFR 60.115b	Shall comply with the requirements of 40 CFR 60.115b, 60.116b(a), and 60.110a	Monitoring, Recordkeeping and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1		Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only		Shall comply with all the applicable requirements of these sections. Compliance with 40 CFR 60.110b is considered as MACT.	Monitoring, Recordkeeping and Reporting.
1250-95 and 1251-95 EFR Tanks F-496 and 497	NESHAP, Subpart CC - HAP Emissions from Petroleum Refineries 40 CFR 63.654	Group I Tank - Shall comply with all the applicable requirements of 40 CFR 63.654.	Monitoring, Recordkeeping, and Reporting.

BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
 SHELL NORCO CHEMICAL PLANT-EAST SITE
 NORCO, ST. CHARLES PARISH, LOUISIANA

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
1250-95 and 1251-95 EFR Tanks F-496 and 497 (Continued)	NSPS, Subpart Ka - Petroleum Liquid Storage Vessels 40 CFR 60.113a and 115a	Shall comply with all the applicable requirements of these sections	Monitoring, Recordkeeping, and Reporting.
Control of Emissions of Organic Compounds - Storage of VOC LAC 33:III.2103.1		Shall comply with the requirements of LAC 33:III.2103.1	Monitoring, Recordkeeping, and Reporting.
Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only		Shall comply with all the applicable requirements of these sections. Compliance with 40 CFR 60.110a is considered as MACT.	Monitoring, Recordkeeping and Reporting.
2-95 OL-5 Ethylene Furnace F-140	Control of Emissions of Smoke LAC 33:III.1101	Shall maintain opacity less than 20% average and may have in excess of 20% for not more than one six minute period in any 60 consecutive minutes.	Monitoring
	Emissions of Particulate Matter LAC 33:III.1313	Shall not emit in excess of 0.6 lb per MM BTU of heat input.	Monitoring, Recordkeeping, and Reporting.
	Emissions Limitations for Sulfur Dioxide LAC 33:III.1503 and 1513.	Shall retain records for at least five years and comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NSPS, Subpart J - Petroleum Refineries 40 CFR 60.105, 107 and 108	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping, and Reporting.
3007-95 OL-5 Fugitive Emissions	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene Subpart V 40 CFR 61.245 thru 247	Shall comply with all the applicable requirements of these sections. Complying with these sections is also compliance with 40 CFR 61, Subpart J	Monitoring, Recordkeeping, and Reporting

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 3: COMPLIANCE MONITORING DEVICES, ACTIVITIES, OR METHODS

Emission Point/Description	Applicable Compliance Requirement	Monitoring, Reporting, and Recordkeeping Method/Provision	Notes
3007-95 OL-5 Fugitive Emissions (Continued)	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections and the State Only Specific Condition No. 1	Monitoring, Recordkeeping and Reporting.
	Control of Emissions of Organic Compounds - Fugitive emission Control LAC 33:III.2121.C.D.E and F	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
3108-95 and 3109-95 OL-5 OWS	Oil/Water - Separation LAC 33:III.2109.D	Maintain records for five years and comply with the requirements of this section	Recordkeeping.
	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
3207-95 OL-5-WW Wastewater	Comprehensive Toxic Air Pollutant Emission Control Program LAC 33:III.5107 and 5109 State Only	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.
	NESHAP, Subpart FF - National Emission Standard for Benzene waste Operations 40 CFR 61.354 thru 357	Shall comply with all the applicable requirements of these sections.	Monitoring, Recordkeeping and Reporting.

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 4: COMPLIANCE TESTING REQUIREMENTS

Emission Point	Control Devices / Work Practices	Test Method	Criteria being tested	Notes
NA				

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
NORCO, ST. CHARLES PARISH, LOUISIANA**

TABLE 5: EQUIPMENT LIST

Emission Point/Identifier	Description	Capacity (gallons)	Date of Construction	Notes
C3 Vent	Vent	-	-	Controlled as per the applicable requirements of LAC 33:III.2115J and K
BD-5 Maintenance Wastewater	Wastewater	-	-	Controlled as per the applicable requirements of 40 CFR 63.105(e)

40 CFR PART 70 GENERAL CONDITIONS

- A. The term of this permit shall be five (5) years from date of issuance. An application for a renewal of this 40 CFR Part 70 permit shall be submitted to the administrative authority no later than six months prior to the permit expiration date. Should a complete permit application not be submitted six months prior to the permit expiration date, a facility's right to operate is terminated pursuant to 40 CFR Section 70.7(c)(ii). Operation may continue under the conditions of this permit during the period of the review of the application for renewal. [LAC 33:III.507.E.1, E.3, E.4, reference 40 CFR 70.6(a)(2)]
- B. The conditions of this permit are severable; and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [Reference 40 CFR 70.6(a)(5)]
- C. Permittee shall comply with all conditions of the 40 CFR Part 70 permit. Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [LAC 33:III.507.B.2, reference 40 CFR 70.6(a)(6)(i) & (iii)]
- D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [Reference 40 CFR 70.6(a)(6)(ii)]
- E. This permit does not convey any property rights of any sort, or an exclusive privilege. [Reference 40 CFR 70.6(a)(6)(iv)]
- F. The permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the permitting authority copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. A claim of confidentiality does not relieve the permittee of the requirement to provide the information. [LAC 33:III.507.B.2, 517.F, reference 40 CFR 70.6(a)(6)(v)]
- G. Permittee shall pay fees in accordance with LAC 33:III.Chapter 2 and 40 CFR Section 70.6(a)(7). [LAC 33:III.501.C.2, reference 40 CFR 70.6(a)(7)]
- H. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the permitting authority or authorized representative to perform the following:
 - 1. enter upon the permittee's premises where a 40 CFR Part 70 source is located or emission-related activity is conducted, or where records must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(i)];

40 CFR PART 70 GENERAL CONDITIONS

2. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(ii)];
 3. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iii)]; and
 4. as authorized by the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iv)]
- I. All required monitoring data and supporting information shall be kept available for inspection at the facility or alternate location approved by the agency for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and all reports required by the permit.
[Reference 40 CFR 70.6(a)(3)(ii)(B)]
- J. Records of required monitoring shall include the following:
1. the date, place as defined in the permit, and time of sampling or measurements;
 2. the date(s) analyses were performed;
 3. the company or entity that performed the analyses;
 4. the analytical techniques or methods used;
 5. the results of such analyses; and
 6. the operating conditions as existing at the time of sampling or measurement.
- [Reference 40 CFR 70.6(a)(3)(ii)(A)]
- K. Permittee shall submit at least semiannually, reports of any required monitoring, clearly identifying all instances of deviations from permitted monitoring requirements, certified by a responsible company official. For previously reported deviations, in lieu of attaching the individual deviation reports, the semiannual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The semiannual reports shall be submitted to the Office of Environmental Compliance, Enforcement Division by March 31 for the preceding period encompassing July through December and September 30 for the preceding period encompassing January through June. Any quarterly deviation report required to be submitted by March 31 or September 30 in accordance with Part 70 General Condition R may be consolidated with the semi-annual reports required by this general condition as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [LAC 33:III.507.H, reference 40 CFR 70.6(a)(3)(iii)(A)]
- L. The permittee shall submit at least semiannual reports on the status of compliance pursuant to 40 CFR Section 70.5 (c) (8) and a progress report on any applicable schedule of compliance pursuant to 40 CFR Section 70.6 (c) (4). [LAC 33:III.507.H.1, reference 40 CFR 70.6(c)(4)]

40 CFR PART 70 GENERAL CONDITIONS

- M. Compliance certifications per LAC 33:III.507.H.5 shall be submitted to the Administrator as well as the permitting authority. For previously reported compliance deviations, in lieu of attaching the individual deviation reports, the annual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The compliance certifications shall be submitted to the Office of Environmental Compliance, Enforcement Division by March 31 for the preceding calendar year. [LAC 33:III.507.H.5, reference 40 CFR 70.6(c)(5)(iv)]

- N. If the permittee seeks to reserve a claim of an affirmative defense as provided in LAC 33:III.507.J.2, the permittee shall, in addition to any emergency or upset provisions in any applicable regulation, notify the permitting authority within 2 working days of the time when emission limitations were exceeded due to the occurrence of an upset. In the event of an upset, as defined under LAC 33:III.507.J, which results in excess emissions, the permittee shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an emergency occurred and the cause was identified; 2) the permitted facility was being operated properly at the time; and 3) during the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standard or requirement of the permit. [LAC 33:III.507.J.2, reference 40 CFR 70.6(g)(3)(iv) & (i-iii)]

- O. Permittee shall maintain emissions at a level less than or equal to that provided for under the allowances that the 40 CFR Part 70 source lawfully holds under Title IV of the Clean Air Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act. [Reference 40 CFR 70.6(a)(4)]

- P. Any permit issued pursuant to 40 CFR Part 70 may be subject to reopening prior to the expiration of the permit for any of the conditions specified in 40 CFR Section 70.7(f) or LAC 33:III.529. [LAC 33:III.529.A-B, reference 40 CFR 70.7(f)]

- Q. Permittee may request an administrative amendment to the permit to incorporate test results from compliance testing if the following criteria are met:
 - 1. the changes are a result of tests performed upon start-up of newly constructed, installed, or modified equipment or operations;
 - 2. increases in permitted emissions will not exceed five tons per year for any regulated pollutant;
 - 3. increases in permitted emissions of Louisiana toxic air pollutants or of federal hazardous air pollutants would not constitute a modification under LAC 33:III. Chapter 51 or under Section 112 (g) of the Clean Air Act;

40 CFR PART 70 GENERAL CONDITIONS

- 4. changes in emissions would not require new source review for prevention of significant deterioration or nonattainment and would not trigger the applicability of any federally applicable requirement;
 - 5. changes in emissions would not qualify as a significant modification; and
 - 6. the request is submitted no later than 12 months after commencing operation. [LAC 33:III.523.A, reference 40 CFR 70.7(d)]
- R. Permittee shall submit prompt reports of all permit deviations as specified below to the Office of Environmental Compliance, Enforcement Division. All such reports shall be certified by a responsible official in accordance with 40 CFR 70.5(d).
- 1. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
 - 2. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
 - 3. A written report shall be submitted quarterly to address all permit deviations not included in paragraphs 1 or 2 above. Unless required by an applicable reporting requirement, a written report is not required during periods in which there is no deviation. The quarterly deviation reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by Part 70 General Condition K as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. For previously reported permit deviations, in lieu of attaching the individual deviation reports, the quarterly report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any permit deviations occurring during the corresponding specified calendar quarter:
 - a. Report by June 30 to cover January through March
 - b. Report by September 30 to cover April through June
 - c. Report by December 31 to cover July through September
 - d. Report by March 31 to cover October through December
 - 4. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided such reports are certified in accordance with 40 CFR 70.5(d) and contain all information relevant to the permit deviation. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107. [Reference 40 CFR 70.6(a)(3)(iii)(B)]

40 CFR PART 70 GENERAL CONDITIONS

- S. Permittee shall continue to comply with applicable requirements on a timely basis, and will meet on a timely basis applicable requirements that become effective during the permit term. [Reference 40 CFR 70.5(c)(8)(iii)]
- T. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - 1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156;
 - 2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158;
 - 3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161;
 - 4. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. ("MVAC-like appliance" as defined at 40 CFR 82.152);
 - 5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156; and
 - 6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166. [Reference 40 CFR 82, Subpart F]
- U. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant. [Reference 40 CFR 82, Subpart B]
- V. Data availability for continuous monitoring or monitoring to collect data at specific intervals: Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emissions unit is operating. For purposes of reporting monitoring deviations under Part 70 General Conditions K and R, and unless otherwise provided for in the Specific Requirements (or Table 3) of this permit, the minimum degree of data availability shall be at least 90% (based on a monthly average) of the operating time of the emissions unit or activity being monitored. This condition does not apply to Leak Detection and Repair (LDAR) programs for fugitive emissions (e.g., 40 CFR 60 Subpart VV, 40 CFR 63 Subpart H).

LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated January 26, 2009, along with supplemental information as of February 3, 2009.
- IV. This permit shall become invalid, for the sources not constructed, if:
 - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
 - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.
This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.

LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.
- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.
 - A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
 - B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

- C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
 - 1. Report by June 30 to cover January through March
 - 2. Report by September 30 to cover April through June
 - 3. Report by December 31 to cover July through September
 - 4. Report by March 31 to cover October through December
- D. Each report submitted in accordance with this condition shall contain the following information:
 - 1. Description of noncomplying emission(s);
 - 2. Cause of noncompliance;
 - 3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
 - 4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
 - 5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
- B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
- C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
- D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.
- XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.
- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services in accordance with LAC 33:I.Chapter 19.Facility Name and Ownership/Operator Changes Process.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
 2. Be less than the minimum emission rate (MER)
 3. Be scheduled daily, weekly, monthly, etc., or
 4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]
- These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.
- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

**LOUISIANA AIR EMISSION PERMIT
GENERAL CONDITIONS**

Attention: Office of the Secretary, Legal Services Division
La. Dept. of Environmental Quality
Post Office Box 4302
Baton Rouge, Louisiana 70821-4302

- XIX. For Part 70 sources, certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

AIR QUALITY DATA SHEET

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA.**

Location of facility: 15 UTM: 750.563 Km E 3321.777 Km N

Description of location: Located on U. S. Highway 61 in Norco

Estimated starting date of construction: Existing

Estimated starting date of operation: _____ Existing

Type of Dispersion Calculations Used: SCREEN3

EFFECTS ON AMBIENT AIR

Pollutant	Time Period	Calculated Maximum Ground Level Concentration	Louisiana Air Quality Standard (NAAQS)
1,3-Butadiene	Annual	0.43 ug/m ³	0.92 ug/m ³

EXISTING OR MODIFIED X EMISSION SOURCES Petroleum Refinery & SOCM
(Type of
Source)

EMISSION POINT LIST

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point No.	Description	Operating Rate (Max) or Tank Capacity	Op. Schedule		
			H/D	D/WW	Y
1003-95	Internal Floating Roof Tank, K-495 (IFR)	51,393 gal	24	7	52
1101-95	Fixed Roof Tank, K-489	5,212 gal	24	7	52
1200-95	IFR Tank, K-493	130,526 gal	24	7	52
1201-95	IFR Tank, K-494	130,526 gal	24	7	52
2005-95	Cooling Water Tower	140,000 gpm	24	7	52
3001-95	Fugitive Emissions, BD-5	NA	24	7	52
3204-95	Wastewater Emissions, BD-5	NA	24	7	52
1001-95	IFR Tank, F-491	7,613,730 gal	24	7	52
1002-95	External Floating Roof Tank, F-509 (EFR)	4,605,826 gal	24	7	52
1005-95	Fixed Roof Tank, B-479	38,069 gal	24	7	52
1252-95	EFR Tank, F-502	13,744,884 gal	24	7	52
3-95	EFR Tank, F-495	6,537,400 gal	24	7	52
3005-95	Fugitive Emissions, GHT	NA	24	7	52
3205-95	Wastewater Emissions, GHT	NA	24	7	52
5-95	Restart Fugitives, GHT	NA	24	7	52
1-73	Heater, F-126, GO-1	213 MM BTU/hr	24	7	52
2-73	Heater, F-127, GO-1	213 MM BTU/hr	24	7	52
3-73	Heater, F-128	213 MM BTU/hr	24	7	52
4-73	Heater, F-129	213 MM BTU/hr	24	7	52
5-73	Heater, F-130	213 MM BTU/hr	24	7	52
6-73	Heater, F-131	325 MM BTU/hr	24	7	52
7-73	Heater, F-132	325 MM BTU/hr	24	7	52
8-73	Heater, F-133	325 MM BTU/hr	24	7	52
9-73	Heater, F-134	325 MM BTU/hr	24	7	52
10-73	Knock Out Drum Vent, GO-1	4,800 lb/hr	10	1	12
1008-95	Fixed Roof Tank, F-467	21,219 gal	24	7	52
1018-95	Fixed Roof Tank, B-480	113,824 gal	24	7	52
1052-95	Fixed Roof Tank, K-462	6,186 gal	24	7	52
1076-95	Fixed Roof Tank, B-478	11,844 gal	24	7	52
1077-95	Fixed Roof Tank, M-420	14,217 gal	24	7	52
1090-95	Fixed Roof Tank, W-413	21,149 gal	24	7	52
1099-95	Fixed Roof Tank, PV-274	4,894 gal	24	7	52
1105-95	Fixed Roof Tank, PV-1666	940 gal	24	7	52

EMISSION POINT LIST

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point No.	Description	Operating Rate (Max) or Tank Capacity	Op. Schedule		
			H/D	D/WW	Y
1264-95	IFR Tank, K-478	634,500 gal	24	7	52
2003-95	Cooling Water Tower, GO-1 South	40,000 gpm	24	7	52
2004-95	Cooling Water Tower, GO-1 North	62,720 gpm	24	7	52
3006-95	Fugitive Emissions, GO-1	NA	24	7	52
3110-95	Oil/Water Separator, GO-1	191 gpm	24	7	52
3206-95	Wastewater Emissions, GO-1	NA	24	7	52
1-96	Fixed Roof Tank, K-455	10,575 gal	24	7	52
5004-97	New Furnace, GO-1	386 MM BTU/hr	24	7	52
7-76	Furnace, F-141, OL-5	385 MM BTU/hr	24	7	52
9-76	Furnace, F-143, OL-5	385 MM BTU/hr	24	7	52
10-76	Furnace, F-144, OL-5	385 MM BTU/hr	24	7	52
11-76	Furnace, F-145, OL-5	385 MM BTU/hr	24	7	52
12-76	Furnace, F-146, OL-5	385 MM BTU/hr	24	7	52
13-76	Furnace, F-147, OL-5	385 MM BTU/hr	24	7	52
14-76	Furnace, F-148, OL-5	385 MM BTU/hr	24	7	52
15-76	Furnace, F-149, OL-5	385 MM BTU/hr	24	7	52
16-76	Furnace, F-150, OL-5	385 MM BTU/hr	24	7	52
17-76	Furnace, F-151, OL-5	385 MM BTU/hr	24	7	52
18-76	Furnace, F-152, OL-5	385 MM BTU/hr	24	7	52
19-76	Furnace, F-153, OL-5	385 MM BTU/hr	24	7	52
20-76	Furnace, F-154, OL-5	385 MM BTU/hr	24	7	52
6-84	Elevated Flare, FE-101, OL-5	25 MM BTU/hr (452.23 MM BTU/hr)	24	7	52
7-84	Ground Flare, FG-101, OL-5	25 MM BTU/hr (452.23 MM BTU/hr)	24	7	52
1001-94	EFR Tank, F-499	13,744,884 gal	24	7	52
1012-95	Fixed Roof Tank, K-498	37,599 gal	24	7	52
1032-95	Fixed Roof Tank, B-482	433,137 gal	24	7	52
1033-95	Fixed Roof Tank, B-483	230,292 gal	24	7	52
1039-95	Fixed Roof Tank, K-501	2,595 gal	24	7	52
1055-95	IFR Tank, B-484	300,789 gal	24	7	52
1060-95	Fixed Roof Tank, K-500	11,474 gal	24	7	52
1061-95	Fixed Roof Tank, F-431	3,090,519 gal	24	7	52
1062-95	Fixed Roof Tank, F-434	3,244,507 gal	24	7	52

EMISSION POINT LIST

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point No.	Description	Operating	Op. Schedule		
		Rate (Max) or Tank Capacity	H/D	D/WW/Y	
1063-95	Fixed Roof Tank, F-435	3,244,507 gal	24	7	52
1064-95	Fixed Roof Tank, H-432	1,526,553 gal	24	7	52
1065-95	Fixed Roof Tank, H-433	1,526,556 gal	24	7	52
1066-95	Fixed Roof Tank, H-438	1,151,459 gal	24	7	52
1078-95	Fixed Roof Tank, M-421	21,149 gal	24	7	52
1084-95	Fixed Roof Tank, K-509	88,122 gal	24	7	52
1085-95	Fixed Roof Tank, K-510	88,122 gal	24	7	52
1093-95	Fixed Roof Tank, W-433	208,702 gal	24	7	52
1250-95	EFR Tank, F-496	13,744,884 gal	24	7	52
1251-95	EFR Tank, F-497	13,744,884 gal	24	7	52
2-95	Ethylene Furnace, F-140, OL-5	334 MM BTU/hr	24	7	52
3007-95	Fugitive Emissions, OL-5	NA	24	7	52
3108-95	Oil/Water Separator, OL-5	20 gpm	24	7	52
3109-95	Oil/Water Separator, OL-5	20 gpm	24	7	52
3207-95	Wastewater Emissions, OL-5	NA	24	7	52
1211-95	External Floating Roof Tank, F-498 (EFR)	12648514 gal	24	7	52
1212-95	External Floating Roof Tank, F-500 (EFR)	12648514 gal	24	7	52
1243-95	External Floating Roof Tank, F-483 (EFR)	3383966 gal	24	7	52
1244-95	External Floating Roof Tank, F-494 (EFR)	6016191 gal	24	7	52
5005-97	OL-5 Feed Tank (CAP)	NA	24	7	52

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

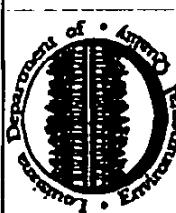
Emission Point No.	Description	Operating Rate (Max) or Tank Capacity	Op. Schedule		
			H/D	D	W/W/Y
<u>GCXVII LISTING</u>					
Sampling Procedures					
1	GO-1 Unit	7,200 times/yr	24	7	52
2	OL-5 Unit	3,600 times/yr	24	7	52
3	BD-5 Unit	360 times/yr	24	7	52
4	GHT Unit	312 times/yr	24	7	52
Pumps and Equipment Schedule Downtime					
Filters, Exchangers, and Line Cleaning					
5	GO-1 Unit	840 times/yr	24	7	52
6	OL-5 Unit	240 times/yr	24	7	52
7	GHT Unit	48 times/yr	24	7	52
Instrumentation Mechanical Work					
8	BD-5 Unit	180 times/yr	24	7	52
9	GHT Unit	180 times/yr	24	7	52
<u>INSIGNIFICANT ACTIVITIES</u>					
<i>LAC 33:III.501.B.5.A.3 TANKS</i>					
BD-5 Unit,					
-	Alkyl Hydroxylamine, PV-1973	-	24	7	52
-	Polymerization Inhibitor, PV-1955	-	24	7	52
-	Dispersant, N83733	2,400 gal	24	7	52
-	Inhibitor, Portafeed	1,000 gal	24	7	52
GHT Unit					
-	Vendor Chemical, Portafeed	400 gal	24	7	52
-	Antioxidant, K-538	5,000	24	7	52
GO-1 Unit					
-	Soap, TK-101 and 102	-	24	7	52
-	Inhibitor, N84055	-	24	7	52
-	Two Drums	55 gal each	24	7	52
-	Sulfinol Solution, K-486	-	24	7	52

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point No.	Description	Operating Rate (Max) or Tank Capacity	Op.	Schedule H/D	D/WW/Y
GO-1N CWT					
-	Dispersant, N84061	-	24	7	52
-	Lube Oil, F-106	-	24	7	52
-	Lube Oil, F-107	-	24	7	52
-	Lube Oil, F-108	-	24	7	52
GO-1S CWT					
-	Disperdant, N84062	-	24	7	52
OL-5 Unit					
-	Morpholine, PV-1889	3,300 gal	24	7	52
-	Catechol/Amine Blend, SHOL513AF	2,000 gal	24	7	52
-	Inhibitor, N84066	2,000 gal	24	7	52
-	Soap, TK-101, 102	-	24	7	52
-	Soap, TK-103	-	24	7	52
LAC 33.III.501.B.5.A.4 TANKS					
BD-5 Unit					
-	Caustic Soda, PV-1944	-	24	7	52
GO-1 Unit					
-	Three Caustic, K-456, 457, and 468	-	24	7	52
-	Fresh Caustic, K-461	-	24	7	52
OL-5 unit					
-	Fresh Caustic, K-499	24,190	24	7	52
OTHER GENERAL INSIGNIFICANT ACTIVITIES					
-	Bleach Tank	1,750 gal	24	7	52
-	Metal Soap Tank (7)	560 gal each	24	7	52
-	Process Additive Tanks (26)	2,000 gal Max.	24	7	52
-	Caustic Tanks (4)	1,522 gal Max.	24	7	52

<u>ssion</u>	<u>Operating</u>	<u>Op. Schedule</u>
--------------	------------------	---------------------



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102	NORCO CHEMICAL PLANT - EAST SITE NORCO, LA Date of Submittal JULY 1989																						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA																						
Source ID Number 1101-95	Descriptive name of the equipment served by this stack or vent TANK K-489 FIXED ROOF																						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 21.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification / /	Operating rate (Max) or tank capacity 5212 gal																
Fuel	Type of fuel a	Type of heat input N/A	Operating Characteristics		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-Apr Jun-Aug Sep-Nov 25 25 25 25	Normal operating time of this point hrs/day 881.00	Normal Operating Rate days/wk wks/yr 52 7 52																
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average Emission Rate (lbs/hr)</th> <th>Maximum Emission Rate (lbs/hr)</th> <th>Annual Emission Estimation Method (tons/yr)</th> <th>Add. Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>SULFURIC ACID</td> <td>000</td> <td>0.00%</td> <td>0.02</td> <td>12.03</td> <td>0.07</td> <td>3</td> <td></td> </tr> </tbody> </table>								Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission Estimation Method (tons/yr)	Add. Change, or Delete Code	Concentration of gases exiting at stack	SULFURIC ACID	000	0.00%	0.02	12.03	0.07	3	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission Estimation Method (tons/yr)	Add. Change, or Delete Code	Concentration of gases exiting at stack																
SULFURIC ACID	000	0.00%	0.02	12.03	0.07	3																	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Louisiana Single Point/Area/Volume Source Emission Inventory Questionnaire (EIQ) for Air Pollutants																																									
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999																																									
Source ID Number 1003-95	Descriptive name of the equipment served by this stack or vent TANK K-495 INTERNAL FLOATING ROOF		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16																																								
Stack and Discharge Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 27.00	Diameter (ft) or stack discharge area (ft^2) N/A (ft) (ft2)	Stack gas exit temperature (Deg F) N/A																																								
Fuel	Type of fuel a N/A	Type of heat input Heat Input (MMBTU/hr)	Operating Characteristics																																								
		<table border="1"> <thead> <tr> <th colspan="2">Type of fuel used and heat input</th> <th colspan="3">Operating Characteristics</th> <th colspan="3">Percent of annual throughput of pollutants through this emission point</th> <th colspan="3">Normal operating time of this point</th> <th colspan="3">Normal Operating Rate</th> </tr> <tr> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> <td>1,667.00</td> <td>1,667.00</td> <td>1,667.00</td> <td>1,667.00</td> <td>1,667.00</td> <td>1,667.00</td> </tr> </tbody> </table>		Type of fuel used and heat input		Operating Characteristics			Percent of annual throughput of pollutants through this emission point			Normal operating time of this point			Normal Operating Rate			Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	hrs/day	days/wk	wks/yr	hrs/day	days/wk	wks/yr	25	25	25	25	24	7	52	1,667.00	1,667.00	1,667.00	1,667.00	1,667.00	1,667.00
Type of fuel used and heat input		Operating Characteristics			Percent of annual throughput of pollutants through this emission point			Normal operating time of this point			Normal Operating Rate																																
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	hrs/day	days/wk	wks/yr	hrs/day	days/wk	wks/yr																															
25	25	25	25	24	7	52	1,667.00	1,667.00	1,667.00	1,667.00	1,667.00	1,667.00																															
Air Pollutant Specific Information																																											
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																			
TOTAL VOC (INCL LISTED)	000	0.00%	0.07	0.07	0.31	3																																					
ACETONITRILE	000	0.00%	0.07	0.07	0.31	3																																					

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

<p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999																						
Source ID Number 1200-95	Descriptive name of the equipment served by this stack or vent TANK K-493 INTERNAL FLOATING ROOF	Location of stack or vent <input checked="" type="checkbox"/> UTM Zone No. <input type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate mE 3321484																					
Stack and Discharge Physical Characteristics <input checked="" type="checkbox"/> Yes	Height of stack above grade (ft) 42.00	Diameter (ft) or stack discharge area (ft ²) 23.00 (ft ²)	Stack gas exit temperature (Deg F) N/A																					
		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A																					
			Date of construction / modification 1980																					
			Operating rate (Max) or tank capacity 130526 gal																					
			Normal Operating Rate																					
Fuel	Type of fuel a NA	Heat Input (MMBTU/hr) NA	Operating Characteristics																					
			Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov																					
			Normal operating time of this point hrs/day 25 25 25 25																					
			days/wk 7 7 7 7																					
			wks/yr 52 52 52 52																					
			3,300.00 bbl/yr																					
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Emission Rate</th> <th>Emission Estimation Method</th> <th>Add. Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>-</td> <td>0.00%</td> <td>Average (lbs/hr) 0.05</td> <td>Maximum (lbs/hr) 0.05</td> <td>Annual (ton/yr) 0.22</td> <td>3</td> </tr> <tr> <td>ACETONITRILE</td> <td>*</td> <td>0.00%</td> <td>0.05</td> <td>0.05</td> <td>0.22</td> <td>3</td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add. Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	-	0.00%	Average (lbs/hr) 0.05	Maximum (lbs/hr) 0.05	Annual (ton/yr) 0.22	3	ACETONITRILE	*	0.00%	0.05	0.05	0.22	3
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add. Change, or Delete Code	Concentration of gases exiting at stack																		
TOTAL VOC (INCL LISTED)	-	0.00%	Average (lbs/hr) 0.05	Maximum (lbs/hr) 0.05	Annual (ton/yr) 0.22	3																		
ACETONITRILE	*	0.00%	0.05	0.05	0.22	3																		

This source was previously permitted in Part 70 Air Permit No 2520-V0.
 *Internal Floating Roof (See calculations for seal types/fects.)

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																													
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	NORCO, LA																													
		Date of Submittal JULY 1999																													
<p>Descriptive name of the equipment served by this stack or vent TANK K-484 INTERNAL FLOATING ROOF</p>		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16 Horizontal Coordinate 750761 mE Vertical Coordinate 3321475 mN																													
Source ID Number 1201-95	Height of stack above grade (ft) 42.00	Diameter (ft) or stack discharge area (ft ²) 23.00 (ft) (ft²)	Stack gas exit temperature (Deg F) N/A																												
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A																												
Fuel	Type of fuel used and heat input Type of fuel N/A	Operating Characteristics <table border="1"> <tr> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>Percent of annual throughput of pollutants through this emission point</th> <th>Normal operating time of this point</th> <th>Normal Operating Rate</th> </tr> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>3,000.00 bbls/yr</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>7</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>52</td> <td></td> </tr> </table>		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate	25	25	25	25	25	24	3,000.00 bbls/yr						7							52	
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate																									
25	25	25	25	25	24	3,000.00 bbls/yr																									
					7																										
					52																										
Air Pollutant Specific Information		Control Equipment Code	Control Efficiency (%)	Average Emission Rate (lb/hr)	Maximum Annual Emission (ton/yr)	Add, Change, or Delete Code	Concentration of gases exiting at stack																								
TOTAL VOC (INCL LISTED)		•	0.00%	0.04	0.19	3																									
ACETONITRILE		•	0.00%	0.04	0.19	3																									

*Internal Floating Roof (See calculations for seal types/factors)

<p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																																																		
		<p>Date of Submittal JULY 1999</p>																																																																																		
<p>Company Name SHELL CHEMICAL LP</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																																																																																		
<p>Source ID Number 2005-95</p>		<p>Descriptive name of the equipment served by this stack or vent COOLING WATER TOWER-49 BD-5, OL-5, OFH, GHT</p>																																																																																		
<p>Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<table border="1"> <tr> <td>Height of stack above grade (ft) 78.25</td> <td>Diameter (ft) or stack discharge area (ft²) N/A (ft) 690.3 (ft²)</td> <td>Stack gas exit temperature (Deg F) 110</td> <td>Stack gas flow at process conditions, not at standard (ft³/min) 184306.6</td> </tr> <tr> <td colspan="2"></td> <td>Stack gas exit velocity (ft/sec) 43.44</td> <td>Stack gas exit velocity (ft/sec) N/A</td> </tr> <tr> <td colspan="2"></td> <td>Percent of annual throughput of pollutants through this emission point Dec-Feb 25</td> <td>Percent of annual throughput of pollutants through this emission point Mar-May 25</td> </tr> <tr> <td colspan="2"></td> <td>Operating Characteristics Sep-Aug 25</td> <td>Operating Characteristics Sep-Nov 25</td> </tr> <tr> <td colspan="2"></td> <td>Normal operating time of this point hrs/day 24</td> <td>Normal operating time of this point hrs/day 24</td> </tr> <tr> <td colspan="2"></td> <td>Normal Operating Rate wks/yr 52</td> <td>Normal Operating Rate wks/yr 52</td> </tr> <tr> <td colspan="2"></td> <td>Normal Operating Rate gpm 140,000.00</td> <td>Normal Operating Rate gpm 140,000.00</td> </tr> </table>		Height of stack above grade (ft) 78.25	Diameter (ft) or stack discharge area (ft ²) N/A (ft) 690.3 (ft ²)	Stack gas exit temperature (Deg F) 110	Stack gas flow at process conditions, not at standard (ft ³ /min) 184306.6			Stack gas exit velocity (ft/sec) 43.44	Stack gas exit velocity (ft/sec) N/A			Percent of annual throughput of pollutants through this emission point Dec-Feb 25	Percent of annual throughput of pollutants through this emission point Mar-May 25			Operating Characteristics Sep-Aug 25	Operating Characteristics Sep-Nov 25			Normal operating time of this point hrs/day 24	Normal operating time of this point hrs/day 24			Normal Operating Rate wks/yr 52	Normal Operating Rate wks/yr 52			Normal Operating Rate gpm 140,000.00	Normal Operating Rate gpm 140,000.00																																																					
Height of stack above grade (ft) 78.25	Diameter (ft) or stack discharge area (ft ²) N/A (ft) 690.3 (ft ²)	Stack gas exit temperature (Deg F) 110	Stack gas flow at process conditions, not at standard (ft ³ /min) 184306.6																																																																																	
		Stack gas exit velocity (ft/sec) 43.44	Stack gas exit velocity (ft/sec) N/A																																																																																	
		Percent of annual throughput of pollutants through this emission point Dec-Feb 25	Percent of annual throughput of pollutants through this emission point Mar-May 25																																																																																	
		Operating Characteristics Sep-Aug 25	Operating Characteristics Sep-Nov 25																																																																																	
		Normal operating time of this point hrs/day 24	Normal operating time of this point hrs/day 24																																																																																	
		Normal Operating Rate wks/yr 52	Normal Operating Rate wks/yr 52																																																																																	
		Normal Operating Rate gpm 140,000.00	Normal Operating Rate gpm 140,000.00																																																																																	
<p>Fuel <input checked="" type="checkbox"/> a</p>		<table border="1"> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> <tr> <td>N/A</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>		Type of fuel	Heat Input (MMBTU/hr)	N/A																																																																														
Type of fuel	Heat Input (MMBTU/hr)																																																																																			
N/A																																																																																				
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>PARTICULATE MATTER</td> <td>•</td> <td>0.00%</td> <td>4.16</td> <td>4.16</td> <td>18.24</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>•</td> <td>0.00%</td> <td>5.88</td> <td>5.88</td> <td>25.75</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>1,3-BUTADIENE</td> <td>•</td> <td>0.00%</td> <td>0.18</td> <td>0.18</td> <td>0.80</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>ACETONITRILE</td> <td>•</td> <td>0.00%</td> <td>0.23</td> <td>0.23</td> <td>1.02</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>•</td> <td>0.00%</td> <td>0.02</td> <td>0.02</td> <td>0.11</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>•</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>•</td> <td>0.00%</td> <td>0.003</td> <td>0.003</td> <td>0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>•</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	PARTICULATE MATTER	•	0.00%	4.16	4.16	18.24	3			TOTAL VOC (INCL. LISTED)	•	0.00%	5.88	5.88	25.75	3			1,3-BUTADIENE	•	0.00%	0.18	0.18	0.80	3			ACETONITRILE	•	0.00%	0.23	0.23	1.02	3			BENZENE	•	0.00%	0.02	0.02	0.11	3			NAPHTHALENE	•	0.00%	0.001	0.001	<0.01	3			TOLUENE	•	0.00%	0.003	0.003	0.01	3			XYLENE (MIXED ISOMERS)	•	0.00%	0.001	0.001	<0.01	3		
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																												
PARTICULATE MATTER	•	0.00%	4.16	4.16	18.24	3																																																																														
TOTAL VOC (INCL. LISTED)	•	0.00%	5.88	5.88	25.75	3																																																																														
1,3-BUTADIENE	•	0.00%	0.18	0.18	0.80	3																																																																														
ACETONITRILE	•	0.00%	0.23	0.23	1.02	3																																																																														
BENZENE	•	0.00%	0.02	0.02	0.11	3																																																																														
NAPHTHALENE	•	0.00%	0.001	0.001	<0.01	3																																																																														
TOLUENE	•	0.00%	0.003	0.003	0.01	3																																																																														
XYLENE (MIXED ISOMERS)	•	0.00%	0.001	0.001	<0.01	3																																																																														

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
* Monitoring program per 40 CFR 63 Subpart F.

Department of Environmental Quality		SINGLE POINT/AREA VOLUME SOURCE	
Air Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	NORCO, LA	
Date of Submittal JULY 1999			
Source ID Number 3001-95	Descriptive name of the equipment served by this stack or vent FUGITIVE EMISSIONS - BUTADIENE UNIT NO.5		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 3.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A
Fuel	Type of fuel <input type="checkbox"/> N/A	Type of fuel used and heat input Heat Input (MMBTU/hr)	Operating Characteristics Dec-Feb Mar-May Jun-Aug Sep-Nov
		Percent of annual throughput of pollutants through this emission point 25	Stack gas exit velocity (ft/sec) N/A
		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Date of construction / modification N/A
		Normal operating time of this point Monday thru Friday 25	Operating rate (Max) or tank capacity N/A
		Normal operating time of this point Monday thru Friday 24	Normal Operating Rate N/A
Air Pollutant Specific Information		Concentration of gases exiting at stack	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lb/ft ³)
TOTAL VOC (INCL. LISTED)	-	0.00%	8.20
1,3-BUTADIENE	-	0.00%	2.50
ACETONITRILE	-	0.00%	0.69
AMMONIA	-	0.00%	0.02
BENZENE	-	0.00%	<0.001
ETHYL BENZENE	-	0.00%	0.001
HEXANE (N)	-	0.00%	0.001
NAPHTHALENE	-	0.00%	0.004
TOLUENE	-	0.00%	0.004
XYLOENE (ISOMERS)	-	0.00%	0.01

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Leak Detection and Repair Program

Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge, LA 70804
(225) 765-0102

LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999
--	---	---------------------------------------

Source ID Number 3204-85	Descriptive name of the equipment served by this stack or vent BD-5 UNIT WASTEWATER EMISSIONS			Location of stack or vent		Horizontal Coordinate UTM Zone No. <input checked="" type="checkbox"/> 15 Vertical Coordinate UTM Zone No. <input type="checkbox"/> 16	Operating rate (Max) or tank capacity Stack gas exit velocity (ft/sec) N/A	Date of construction / modification N/A	Operating rate (Max) or tank capacity Stack gas exit velocity (ft/min) N/A	
	Height of stack above grade (ft) N/A	Diameter (ft) or stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A						
Stack and Discharge Physical Characteristics Change [<input type="checkbox"/> Yes] [<input checked="" type="checkbox"/> No]	Type of fuel used and heat input			Operating Characteristics		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	Normal operating time of this point hrs/day 7 7 52	Normal Operating Rate days/wk N/A	Operating rate (Max) or tank capacity Stack gas exit velocity (ft/min) N/A	
	Type of fuel B	Heat Input (MMBTU/hr)	Heat Input (MMBTU/hr)	Control Equipment Code	Equipment Efficiency (%)					
Air Pollutant Specific Information										
Pollutant TOTAL VOC (INCL. LISTED)	Control Equipment Code 000	Control Equipment Efficiency (%) 0.00%	Emission Rate Average (lbs/hr) 11.59	Emission Rate Maximum (lbs/hr) 11.59	Annual (ton/yr) 50.74	Emission Estimation Method 3	Add, Change, or Delete Code 	Concentration of gases exiting at stack		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

*Unit was constructed in 1977 prior to the May 4, 1987 NSPS, Subpart QQQ applicability date and has not been modified or reconstructed since construction.

<p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>State of Louisiana Department of Environmental Quality</p>																																														
<p align="center">LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																
<p>Company Name SHELL CHEMICAL LP</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																																														
<p>Source ID Number 1001-95</p>		<p>Descriptive name of the equipment served by this stack or vent TANK F-491 INTERNAL FLOATING ROOF</p>																																														
<p>Slack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Height of slack above grade (ft) 40.00</p>	<p>Diameter (ft) or slack discharge area (ft²) 180.00 (ft²)</p>																																													
<p>Fuel</p>		<p>Type of fuel used and heat input <input type="checkbox"/> N/A</p>	<p>Operating Characteristics <input type="checkbox"/> N/A</p>																																													
<p>Location of stack or vent <input checked="" type="checkbox"/> UTM Zone No. <input type="checkbox"/> 15 <input type="checkbox"/> 16</p>		<p>Stack gas exit temperature (Deg F) N/A</p>	<p>Stack gas exit velocity (ft/sec) N/A</p>																																													
<p>Percent of annual throughput of pollutants through this emission point <input type="checkbox"/> Dec-Feb <input type="checkbox"/> Mar-May <input type="checkbox"/> Jun-Aug <input type="checkbox"/> Sep-Nov</p>		<p>Stack gas exit conditions, not at standard (ft³/min) N/A</p>	<p>Date of construction / modification 1971/1996</p>																																													
<p>Normal operating time of this point hrs/day <input type="checkbox"/> 25 <input type="checkbox"/> 25 <input type="checkbox"/> 25 <input type="checkbox"/> 25</p>		<p>Normal operating time of this point days/wk <input type="checkbox"/> 7 <input type="checkbox"/> 7 <input type="checkbox"/> 7 <input type="checkbox"/> 7</p>	<p>Normal Operating Rate hrs/yr <input type="checkbox"/> 180,952.00 <input type="checkbox"/> 52 <input type="checkbox"/> 52 <input type="checkbox"/> 52</p>																																													
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (tons/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>-</td> <td>0.00%</td> <td>0.97</td> <td>1.38</td> <td>4.27</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>-</td> <td>0.00%</td> <td>0.56</td> <td>0.91</td> <td>2.45</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>HEXANE (-N)</td> <td>-</td> <td>0.00%</td> <td>0.04</td> <td>0.06</td> <td>0.18</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>-</td> <td>0.00%</td> <td>0.01</td> <td>0.02</td> <td>0.04</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	-	0.00%	0.97	1.38	4.27	3			BENZENE	-	0.00%	0.56	0.91	2.45	3			HEXANE (-N)	-	0.00%	0.04	0.06	0.18	3			TOLUENE	-	0.00%	0.01	0.02	0.04	3		
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																								
TOTAL VOC (INCL LISTED)	-	0.00%	0.97	1.38	4.27	3																																										
BENZENE	-	0.00%	0.56	0.91	2.45	3																																										
HEXANE (-N)	-	0.00%	0.04	0.06	0.18	3																																										
TOLUENE	-	0.00%	0.01	0.02	0.04	3																																										

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999	
Source ID Number 1002-95	Descriptive name of the equipment served by this stack or vent TANK F-509 EXTERNAL FLOATING ROOF		
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 140.00 (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A
Fuel Type of fuel <input type="checkbox"/> a N/A		Type of fuel used and heat input Heat Input (MMBTU/hr) N/A	
		Operating Characteristics Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	
		Percent of annual throughput of pollutants through this emission point hrs/day hrs/day hrs/wk wks/yr	
		Normal operating time of this point 1979 460526 gal	
		Nominal Operating Rate 5,110,000.00 bbl/yr	
Air Pollutant Specific Information			
Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate
			Estimation Method
TOTAL VOC (INCL. LISTED)	*	0.00%	Average (lbs/hr) Maximum (lbs/hr) Annual (ton/yr)
BENZENE	*	0.00%	0.43 0.43 1.88
ETHYLBENZENE	*	0.00%	0.002 0.002 0.01
STYRENE	*	0.00%	0.004 0.004 0.02
TOLUENE	*	0.00%	0.002 0.002 0.01
XYLENE (MIXED ISOMERS)	*	0.00%	0.08 0.08 0.36
			Concentration of Gases exiting at stack Add, Change, or Delete Code

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

<p>Department of Environmental Quality Air Quality Division P.O. Box 4096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																																							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	NORCO, LA																																																																							
Source ID Number 1005-95	Descriptive name of the equipment served by this stack or vent TANK B-479 FIXED ROOF	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate mE mN																																																																						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 20.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A																																																																						
Fuel	Type of fuel a N/A	<table border="1"> <thead> <tr> <th colspan="2">Type of fuel used and heat input</th> <th colspan="2">Operating Characteristics</th> <th colspan="2">Percent of annual throughput of pollutants through this emission point</th> <th colspan="2">Normal operating time of this point</th> <th colspan="2">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> <th>bbls/yr</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>7</td> <td>52</td> <td>12,882.00</td> <td></td> </tr> </tbody> </table>		Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate		Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	bbls/yr			25	25	25	25	7	52	12,882.00																																									
Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate																																																																	
Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	bbls/yr																																																																
		25	25	25	25	7	52	12,882.00																																																																	
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average Emission Rate (lbs/hr)</th> <th>Maximum Emission Rate (lbs/hr)</th> <th>Annual Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.15</td> <td>1.43</td> <td>0.87</td> <td>3</td> <td></td> </tr> <tr> <td>BENZENE</td> <td>000</td> <td>0.00%</td> <td>0.001</td> <td>0.01</td> <td><0.01</td> <td>3</td> <td></td> </tr> <tr> <td>ETHYLBENZENE</td> <td>000</td> <td>0.00%</td> <td>0.002</td> <td>0.02</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>HEXANE (N)</td> <td>000</td> <td>0.00%</td> <td>0.003</td> <td>0.02</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>STYRENE</td> <td>000</td> <td>0.00%</td> <td>0.001</td> <td>0.01</td> <td><0.01</td> <td>3</td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>000</td> <td>0.00%</td> <td>0.03</td> <td>0.28</td> <td>0.12</td> <td>3</td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>000</td> <td>0.00%</td> <td>0.003</td> <td>0.03</td> <td>0.01</td> <td>3</td> <td></td> </tr> </tbody> </table>										Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	000	0.00%	0.15	1.43	0.87	3		BENZENE	000	0.00%	0.001	0.01	<0.01	3		ETHYLBENZENE	000	0.00%	0.002	0.02	0.01	3		HEXANE (N)	000	0.00%	0.003	0.02	0.01	3		STYRENE	000	0.00%	0.001	0.01	<0.01	3		TOLUENE	000	0.00%	0.03	0.28	0.12	3		XYLENE (MIXED ISOMERS)	000	0.00%	0.003	0.03	0.01	3	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																		
TOTAL VOC (INCL LISTED)	000	0.00%	0.15	1.43	0.87	3																																																																			
BENZENE	000	0.00%	0.001	0.01	<0.01	3																																																																			
ETHYLBENZENE	000	0.00%	0.002	0.02	0.01	3																																																																			
HEXANE (N)	000	0.00%	0.003	0.02	0.01	3																																																																			
STYRENE	000	0.00%	0.001	0.01	<0.01	3																																																																			
TOLUENE	000	0.00%	0.03	0.28	0.12	3																																																																			
XYLENE (MIXED ISOMERS)	000	0.00%	0.003	0.03	0.01	3																																																																			

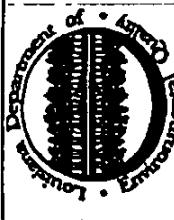
This source was previously permitted in Part 70 Air Permit No. 2520-V0.

7/27/2001

GHT

2520-V2

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA
SINGLE POINT/AREA/VOLUME SOURCE
 Emission Inventory Questionnaire (EIQ)
 for Air Pollutants

Date of Submittal

JULY 1999

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

NORCO, LA

Company Name
SHELL CHEMICAL LP

Source ID Number	Descriptive name of the equipment served by this stack or vent	Location of stack or vent		Stack gas exit velocity (ft/sec)	Date of construction / modification	Operating rate (Max) or tank capacity
		UTM Zone No.	Horizontal Coordinate			
1252-95	TANK F-502 EXTERNAL FLOATING ROOF	X	15			750747 mE 3322788 mN
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/>	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 232.00 (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A		13744984 gal
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Operating Characteristics	Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate
a	N/A		Dec-Feb Mar-May Jun-Aug Sep-Nov	25	hrs/day days/yr	3,068,000.00 bbl/yr
				25	25	7
					52	

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)	-	0.00%	1.37	1.37	6.00	3		
BENZENE	-	0.00%	0.19	0.19	0.83	3		
HEXANE (-N)	-	0.00%	0.10	0.10	0.42	3		
TOLUENE	-	0.00%	0.001	<0.01	0.001	3		

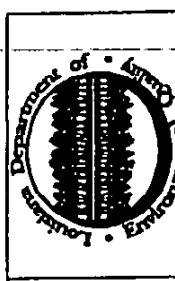
This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality																																																																																																																								
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																																																																																						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16																																																																																																																						
Source ID Number 3005-95	Description of the equipment served by this stack or vent FUGITIVE EMISSIONS GASOLINE HYDROTREATER UNIT	Horizontal Coordinate Vertical Coordinate <input type="checkbox"/> N/A <input type="checkbox"/> N/A																																																																																																																						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 3.00	Diameter (ft) or stack discharge area (ft ²) <input type="checkbox"/> N/A (ft) <input type="checkbox"/> N/A (ft ²)	Stack gas exit temperature (Deg F) <input type="checkbox"/> N/A																																																																																																																					
		Stack gas flow at process conditions, not at standard (ft ³ /min) <input type="checkbox"/> N/A	Stack gas exit velocity (ft/sec) <input type="checkbox"/> N/A																																																																																																																					
			Percent of annual throughput of pollutants through this emission point <input type="checkbox"/> Dec-Feb <input type="checkbox"/> Mar-May <input type="checkbox"/> Jun-Aug <input type="checkbox"/> Sep-Nov																																																																																																																					
			Normal operating time of this point hrs/day <input type="checkbox"/> 25 <input type="checkbox"/> 25 <input type="checkbox"/> 25 <input type="checkbox"/> 25																																																																																																																					
			Operating rate (Max) or tank capacity hrs/day <input type="checkbox"/> N/A <input type="checkbox"/> N/A																																																																																																																					
			Normal operating time of this point days/yr <input type="checkbox"/> 7 <input type="checkbox"/> 52																																																																																																																					
			Normal Operating Rate <input type="checkbox"/> N/A																																																																																																																					
Type of fuel used and heat input <table border="1"> <thead> <tr> <th>Fuel</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>				Fuel	Type of fuel	Heat Input (MMBTU/hr)	a	N/A																																																																																																																
Fuel	Type of fuel	Heat Input (MMBTU/hr)																																																																																																																						
a	N/A																																																																																																																							
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>-</td> <td>0.00%</td> <td>30.76</td> <td>30.76</td> <td>134.74</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>1,3-BUTADIENE</td> <td>-</td> <td>0.00%</td> <td>0.24</td> <td>0.24</td> <td>1.11</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>AMMONIA</td> <td>-</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>-</td> <td>0.00%</td> <td>7.93</td> <td>7.93</td> <td>34.72</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>ETHYL BENZENE</td> <td>-</td> <td>0.00%</td> <td>0.34</td> <td>0.34</td> <td>1.50</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>HEXANE (-N)</td> <td>-</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>HYDROGEN SULFIDE</td> <td>-</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td>0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>-</td> <td>0.00%</td> <td>0.30</td> <td>0.30</td> <td>1.31</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>PHENOL</td> <td>-</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>STYRENE</td> <td>-</td> <td>0.00%</td> <td>0.07</td> <td>0.07</td> <td>0.31</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>-</td> <td>0.00%</td> <td>2.26</td> <td>2.26</td> <td>8.91</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>-</td> <td>0.00%</td> <td>0.72</td> <td>0.72</td> <td>3.14</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	-	0.00%	30.76	30.76	134.74	3			1,3-BUTADIENE	-	0.00%	0.24	0.24	1.11	3			AMMONIA	-	0.00%	0.001	0.001	<0.01	3			BENZENE	-	0.00%	7.93	7.93	34.72	3			ETHYL BENZENE	-	0.00%	0.34	0.34	1.50	3			HEXANE (-N)	-	0.00%	<0.001	<0.001	<0.01	3			HYDROGEN SULFIDE	-	0.00%	0.001	0.001	0.01	3			NAPHTHALENE	-	0.00%	0.30	0.30	1.31	3			PHENOL	-	0.00%	0.001	0.001	<0.01	3			STYRENE	-	0.00%	0.07	0.07	0.31	3			TOLUENE	-	0.00%	2.26	2.26	8.91	3			XYLENE (MIXED ISOMERS)	-	0.00%	0.72	0.72	3.14	3		
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																																																																
TOTAL VOC (INCL LISTED)	-	0.00%	30.76	30.76	134.74	3																																																																																																																		
1,3-BUTADIENE	-	0.00%	0.24	0.24	1.11	3																																																																																																																		
AMMONIA	-	0.00%	0.001	0.001	<0.01	3																																																																																																																		
BENZENE	-	0.00%	7.93	7.93	34.72	3																																																																																																																		
ETHYL BENZENE	-	0.00%	0.34	0.34	1.50	3																																																																																																																		
HEXANE (-N)	-	0.00%	<0.001	<0.001	<0.01	3																																																																																																																		
HYDROGEN SULFIDE	-	0.00%	0.001	0.001	0.01	3																																																																																																																		
NAPHTHALENE	-	0.00%	0.30	0.30	1.31	3																																																																																																																		
PHENOL	-	0.00%	0.001	0.001	<0.01	3																																																																																																																		
STYRENE	-	0.00%	0.07	0.07	0.31	3																																																																																																																		
TOLUENE	-	0.00%	2.26	2.26	8.91	3																																																																																																																		
XYLENE (MIXED ISOMERS)	-	0.00%	0.72	0.72	3.14	3																																																																																																																		
Date of Submittal JULY 1999																																																																																																																								

This source was previously permitted in Part 70 Air Permit No. 2520-VO.
St. Louis Detection and Remedial Program

E

Department of Environmental Quality
 Air Quality Division
 P.O.Box 44048
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name

SHELL CHEMICAL LP

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

Date of Submittal

JULY 1999

Source ID Number

3-95

Descriptive name of the equipment served by this stack or vent

TANK F495 EXTERNAL FLOATING ROOF

Location of stack or vent:

UTM Zone No.

Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft)	Diameter (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)	Stack gas exit velocity (ft/sec)	Horizontal Coordinate		Operating rate (Max) or tank capacity
						UTM Zone	Vertical Coordinate	
-3	40.00	160.00 (ft) (ft ²)	N/A	N/A	N/A	15	16	6537400 gal

Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point		Normal operating time of this point	Normal Operating Rate
	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov
-3	N/A		25	25	25	25	25

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add. Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)	-	0.00%	2.66	3.07	12.43	3
BENZENE	-	0.00%	0.37	0.57	1.55	3
ETHYLBENZENE	-	0.00%	0.01	0.01	0.02	3
HEXANE (-N)	-	0.00%	0.03	0.04	0.11	3
STYRENE	-	0.00%	<0.001	<0.01	0	
TOLUENE	-	0.00%	0.03	0.03	0.18	3
XYLENE (MIXED ISOMERS)	-	0.00%	0.004	0.004	0.02	3

This source was previously permitted in Part 70 Air Permit No. 2520-V0.



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 440965 Baton Rouge, LA 70804 (225) 765-0102		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA		Date of Submission JULY 1999			
Company Name SHELL CHEMICAL LP	Source ID Number 3205-95	Descriptive name of the equipment served by this stack or vent GHT UNIT WASTEWATER EMISSIONS		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate mE 3321221		
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) N/A	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Operating rate (Max) or tank capacity N/A	
Fuel	Type of fuel used and heat input		Operating Characteristics		Normal operating time of this point		
	Type of fuel a N/A	Heat Input (MMBTU/hr)	Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25	hrs/day days/wk wk/yr
Add, Change, or Delete Code							
Air Pollutant Specific Information	Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Emission Estimation Method	Concentration of Gases exiting at stack
TOTAL VOC (INCL LISTED)		000	0.00%	5.15	22.64	3	
BENZENE		000	0.00%	0.004	0.004	0.02	
ETHYL BENZENE		000	0.00%	0.005	0.005	0.02	
NAPHTHALENE		000	0.00%	0.001	0.001	<0.01	
TOLUENE		000	0.00%	0.94	0.94	0.41	
XYLENE (MIXED ISOMERS)		000	0.00%	0.06	0.06	0.28	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

*Unit was constructed in 1977 prior to the May 4, 1987 NSPS. Subpart QQQ applicability date and has not been modified or reconstructed since construction.

Department of Environmental Quality Air Quality Division P.O.Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name SHELL CHEMICAL LP	Source ID Number 5-95	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
		Date of Submittal JULY 1999	
Descriptive name of the equipment served by this stack or vent GHT UNIT RESTART PROJECT FUGITIVES		Location of stack or vent! <input checked="" type="checkbox"/> UTM Zone No. <input type="checkbox"/> 15 <input type="checkbox"/> 16 Horizontal Coordinate <input type="checkbox"/> mE <input type="checkbox"/> mN Vertical Coordinate <input type="checkbox"/> 3321175 <input type="checkbox"/> N/A	
Stack and Discharge Physical Characteristics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) N/A	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (N ²)	Stack gas exit temperature (Deg F) N/A
		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A
		Operating Characteristics	
Fuel	Type of fuel a	Heat Input (MMBTU/hr) N/A	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day 25 25 25 25 24
			Normal operating time of this point day/yr 7 52 N/A
		Nominal Operating Rate wks/yr N/A	
Air Pollutant Specific Information			
Pollutant	Control Equipment Code	Emission Rate	Concentration of gases exiting at stack
		Average (lbs/hr)	Emision Estimation Method
		Maximum (lbs/hr)	Add, Change, or Delete Code
		Annual (tons/yr)	
TOTAL VOC (INCL LISTED)	*	3.06	13.36
BENZENE	*	1.51	8.18
HEXANE (-N)	*	0.06	0.34
STYRENE	*	0.01	0.03
TOLUENE	*	0.07	0.66
XYLENE (MIXED ISOMERS)	*	0.03	0.20

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* LDAR Program.
These emissions are now included in GHT Unit Fugitive Emissions (EPN 3005-95).

Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge, LA 70804
(225) 765-0102



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name

SHELL CHEMICAL LP

Source ID Number:
1-73
Descriptive name of the equipment served by this stack or vent:
PYROLYSIS HEATER F-126 (GO-1S)

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE**NORCO, LA**

Date of Submittal

JULY 1999

Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point			Normal operating time of this point	Normal Operating Rate
	Type of fuel	Heat Input (MMBTu/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	
a • See Note Below	0.00			25	25	25	25	190.00
								MMBTu/hr
								52

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
CARBON MONOXIDE	000	0.00%	7.62	8.54	23.37	3		
NITROGEN OXIDES	000	0.00%	38.10	40.47	158.12	1		
PARTICULATE MATTER	000	0.00%	2.44	2.74	10.69	3		
SULFUR DIOXIDE	000	0.00%	5.15	5.35	22.58	1,3		
TOTAL VOC (INCL. LISTED)	000	0.00%	0.43	0.46	1.87	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

- * Fuel Types/Maximum Heat Input:
 - (a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 213 MMBtu/hr
 - (b) GO-1 Process Gas - 213 MMBtu/hr
 - (c) GO-1 Tail Gas - 213 MMBtu/hr
 - (d) PSA Reject Gas - 213 MMBtu/hr

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102



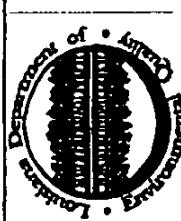
LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA			Date of Submittal JULY 1998																																
Source ID Number 2-73	Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER F-127 (GO-1S)			Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16																																
Stack and Discharge Physical Characteristics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 100.00	Diameter (ft) or stack discharge area (ft ²) 5.00 (ft) (ft²)	Stack gas exit temperature (Deg F) 650	Stack gas flow at process conditions, not at standard (ft ³ /min) 92005																																
Fuel	Type of fuel a * See Note Below	Type of fuel used and heat input Heat Input (MMBTU/hr) 0.00	<table border="1"> <thead> <tr> <th colspan="2">Operating Characteristics</th> <th colspan="3">Percent of annual throughput of pollutants through this emission point</th> <th colspan="3">Normal operating time of this point</th> </tr> <tr> <th></th> <th></th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/yr</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>52</td> <td></td> </tr> </tbody> </table>		Operating Characteristics		Percent of annual throughput of pollutants through this emission point			Normal operating time of this point					Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/yr			25	25	25	25	24	7							52	
Operating Characteristics		Percent of annual throughput of pollutants through this emission point			Normal operating time of this point																															
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/yr																													
		25	25	25	25	24	7																													
						52																														
					Operating Rate 190.00 MMBtu/hr																															
					Normal Operating Rate 190.00 MMBtu/hr																															
					Concentration of gases exiting at stack																															
Air Pollutant Specific Information	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code																													
CARBON MONOXIDE	000	0.00%	7.62	8.54	33.37	3																														
NITROGEN OXIDES	000	0.00%	36.10	40.47	158.12	1																														
PARTICULATE MATTER	000	0.00%	2.44	2.74	10.69	3																														
SULFUR DIOXIDE	000	0.00%	5.15	5.35	22.56	1.3																														
TOTAL VOC (INCL LISTED)	000	0.00%	0.43	0.48	1.87	3																														

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

- * Fuel Types/Maximum Heat Input:
 (a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 213 MMBtu/hr (c) GO-1 Process Gas - 213 MMBtu/hr (d) PSA Reject Gas - 213 MMBtu/hr.



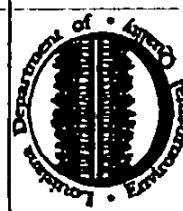
LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 44086 Baton Rouge, LA 70804 (225) 765-0102	Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999				
Source ID Number 3-73	Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER F-128 (GO-1S)						
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft) 100.00	Diameter (ft) or stack discharge area (ft ²) 5.00 (ft) (ft²)	Stack gas exit temperature (Deg F) 650				
Fuel	Type of fuel • See Note Below 0.00	Operating Characteristics					
Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate	
Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	wk/yr
a	0.00	25	25	25	25	7	190.00
		25	25	25	25	52	MMBTU/hr
Air Pollutant Specific Information							
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	
CARBON MONOXIDE	000	0.00%	Average (lb/hr) 7.62	Maximum (lb/hr) 8.54	Annual (ton/yr) 33.37	3	
NITROGEN OXIDES	000	0.00%	36.10	40.47	158.12	1	
PARTICULATE MATTER	000	0.00%	2.44	2.74	10.69	3	
SULFUR DIOXIDE	000	0.00%	5.15	5.35	22.56	1.3	
TOTAL VOC (INCL. LISTED)	000	0.00%	0.43	0.46	1.87	3	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

*Fuel Types/Maximum Heat Input:
(a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 213 MMBtu/hr (b) GO-1 Process Gas - 213 MMBtu/hr (c) GO-1 Tail Gas - 213 MMBtu/hr (d) PSA Reject Gas - 190 MMBtu/hr.

 <p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>		<p>Date of Submittal JULY 1999</p>																																											
<p>Company Name SHELL CHEMICAL LP</p> <p>Source ID Number 4-73</p> <p>Descriptive name of the equipment served by this stack or vent. PYROLYSIS HEATER F-129 (GO-1S)</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																																											
<p>Height of stack above grade (ft) 100.00</p> <p>Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16</p> <p>Horizontal Coordinate mE 3321516</p> <p>Vertical Coordinate mN</p>																																											
<p>Diameter (ft) or stack discharge area (ft²) 5.00 (ft)</p> <p>Stack gas exit temperature (Deg F) 650</p>		<p>Stack gas flow at process conditions, not at standard (ft³/min) 92005</p> <p>Stack gas exit velocity (ft/sec) 76.09</p> <p>Date of construction / modification N/A</p> <p>Operating rate (Max) or tank capacity 213 MMBtu/hr</p>																																											
<p>Type of fuel used and heat input</p> <table border="1"> <tr> <td>Fuel</td> <td>Type of fuel a * See Note Below</td> <td>Heat Input (MMBTU/hr) 0.00</td> </tr> <tr> <td colspan="3">Operating Characteristics</td> </tr> <tr> <td>Dec-Feb</td> <td>Mar-May</td> <td>Jun-Aug</td> </tr> <tr> <td>25</td> <td>25</td> <td>25</td> </tr> </table>		Fuel	Type of fuel a * See Note Below	Heat Input (MMBTU/hr) 0.00	Operating Characteristics			Dec-Feb	Mar-May	Jun-Aug	25	25	25	<p>Percent of annual throughput of pollutants through this emission point</p> <table border="1"> <tr> <td>Percent of annual throughput of pollutants through this emission point</td> <td>Normal operating time of this point</td> </tr> <tr> <td>Dec-Feb 25</td> <td>Normal operating time of this point Sep-Nov hrs/day 25</td> </tr> <tr> <td>Mar-May 25</td> <td>days/wk 24</td> </tr> <tr> <td>Jun-Aug 25</td> <td>wkly/yr 7</td> </tr> <tr> <td></td> <td>N/A</td> </tr> </table>		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Dec-Feb 25	Normal operating time of this point Sep-Nov hrs/day 25	Mar-May 25	days/wk 24	Jun-Aug 25	wkly/yr 7		N/A																				
Fuel	Type of fuel a * See Note Below	Heat Input (MMBTU/hr) 0.00																																											
Operating Characteristics																																													
Dec-Feb	Mar-May	Jun-Aug																																											
25	25	25																																											
Percent of annual throughput of pollutants through this emission point	Normal operating time of this point																																												
Dec-Feb 25	Normal operating time of this point Sep-Nov hrs/day 25																																												
Mar-May 25	days/wk 24																																												
Jun-Aug 25	wkly/yr 7																																												
	N/A																																												
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Emission Rate</th> <th>Annual Emission Method</th> <th>Add. Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>000</td> <td>0.00%</td> <td>Average (lbs/hr) 7.62</td> <td>Maximum (tons/yr) 8.54</td> <td>33.37</td> <td>3</td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>000</td> <td>0.00%</td> <td>36.10</td> <td>40.47</td> <td>158.12</td> <td>1</td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>000</td> <td>0.00%</td> <td>2.44</td> <td>2.74</td> <td>10.69</td> <td>3</td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>000</td> <td>0.00%</td> <td>5.15</td> <td>5.35</td> <td>22.58</td> <td>1.3</td> </tr> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.43</td> <td>0.48</td> <td>1.87</td> <td>3</td> </tr> </tbody> </table>		Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate	Annual Emission Method	Add. Change, or Delete Code	Concentration of gases exiting at stack	CARBON MONOXIDE	000	0.00%	Average (lbs/hr) 7.62	Maximum (tons/yr) 8.54	33.37	3	NITROGEN OXIDES	000	0.00%	36.10	40.47	158.12	1	PARTICULATE MATTER	000	0.00%	2.44	2.74	10.69	3	SULFUR DIOXIDE	000	0.00%	5.15	5.35	22.58	1.3	TOTAL VOC (INCL LISTED)	000	0.00%	0.43	0.48	1.87	3	<p>This source was previously permitted in Part 70 Air Permit No. 2520-V0.</p>	
Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate	Annual Emission Method	Add. Change, or Delete Code	Concentration of gases exiting at stack																																							
CARBON MONOXIDE	000	0.00%	Average (lbs/hr) 7.62	Maximum (tons/yr) 8.54	33.37	3																																							
NITROGEN OXIDES	000	0.00%	36.10	40.47	158.12	1																																							
PARTICULATE MATTER	000	0.00%	2.44	2.74	10.69	3																																							
SULFUR DIOXIDE	000	0.00%	5.15	5.35	22.58	1.3																																							
TOTAL VOC (INCL LISTED)	000	0.00%	0.43	0.48	1.87	3																																							

* Fuel Types/Maximum Heat Input
(a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 213 MMBtu/hr (c) GO-1 Tail Gas - 213 MMBtu/hr (d) PSA Reject Gas - 213 MMBtu/hr.



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																							
Company Name SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA																																																							
Source ID Number 5-73		Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER F-130 (GO-19)																																																							
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Height of stack above grade (ft) 100.00	Diameter (ft) or stack discharge area (ft ²) 5.00 (ft) (ft ²)																																																						
		Stack gas exit temperature (Deg F) 650	Stack gas flow at process conditions, not at standard (ft ³ /min) 130744																																																						
		Type of fuel used and heat input <table border="1"> <tr> <th>Fuel</th> <th>Type of fuel * See Note Below</th> <th>Heat Input (MMBTU/hr)</th> <th>Operating Characteristics</th> </tr> <tr> <td></td> <td></td> <td>0.00</td> <td> Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day wks/yr </td> </tr> <tr> <td></td> <td></td> <td></td> <td>25 25 25 24 7 52</td> </tr> <tr> <td></td> <td></td> <td></td> <td>MMBTU/hr</td> </tr> </table>		Fuel	Type of fuel * See Note Below	Heat Input (MMBTU/hr)	Operating Characteristics			0.00	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day wks/yr				25 25 25 24 7 52				MMBTU/hr																																						
Fuel	Type of fuel * See Note Below	Heat Input (MMBTU/hr)	Operating Characteristics																																																						
		0.00	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov hrs/day wks/yr																																																						
			25 25 25 24 7 52																																																						
			MMBTU/hr																																																						
		Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>000</td> <td>0.00%</td> <td>12.09</td> <td>12.08</td> <td>52.97</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>..</td> <td>0.00%</td> <td>61.72</td> <td>81.88</td> <td>357.95</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>000</td> <td>0.00%</td> <td>3.87</td> <td>3.87</td> <td>16.93</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>000</td> <td>0.00%</td> <td>2.58</td> <td>2.58</td> <td>11.19</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.43</td> <td>0.43</td> <td>1.87</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>		Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	CARBON MONOXIDE	000	0.00%	12.09	12.08	52.97	3			NITROGEN OXIDES	..	0.00%	61.72	81.88	357.95	5			PARTICULATE MATTER	000	0.00%	3.87	3.87	16.93	3			SULFUR DIOXIDE	000	0.00%	2.58	2.58	11.19	3			TOTAL VOC (INCL. LISTED)	000	0.00%	0.43	0.43	1.87	3		
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																	
CARBON MONOXIDE	000	0.00%	12.09	12.08	52.97	3																																																			
NITROGEN OXIDES	..	0.00%	61.72	81.88	357.95	5																																																			
PARTICULATE MATTER	000	0.00%	3.87	3.87	16.93	3																																																			
SULFUR DIOXIDE	000	0.00%	2.58	2.58	11.19	3																																																			
TOTAL VOC (INCL. LISTED)	000	0.00%	0.43	0.43	1.87	3																																																			

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input:

(a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 302 MMBtu/hr (c) GO-1 Tail Gas - 302 MMBtu/hr (d) PSA Reject Gas - 302 MMBtu/hr.

** Two or three zones of burners are equipped with low NOx burners.

Department of Environmental Quality		SINGLE POINT/AREA VOLUME SOURCE				
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ) for Air Pollutants				
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999				
Source ID Number 6-73	Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER, F-131 (GO-1S)		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16			
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 100.00	Diameter (ft) or stack discharge area (ft ²) 5.00 (ft) (ft²)	Stack gas exit temperature (Deg F) 650			
			Stack gas flow at process conditions, not at standard (ft ³ /min) 116224			
Fuel	Type of fuel B * See Note Below	Heat Input (MMBtu/hr) 0.00	Operating Characteristics			
			Percent of annual throughput of pollutants through this emission point Dec-Feb 25 Mar-Apr 25 Jun-Aug 25 Sep-Nov 25			
			Normal operating time of this point hrs/day 24 wks/yr 52			
Air Pollutant Specific Information		Add, Change, or Delete Code	Concentration of gases exiting at stack			
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate			
		Average (lb/ft ³)	Maximum (lb/ft ³)			
CARBON MONOXIDE	000	0.00%	8.13	8.92	35.63	5
NITROGEN OXIDES	**	0.00%	108.56	117.52	475.48	5
PARTICULATE MATTER	000	0.00%	3.44	4.18	15.08	3
SULFUR DIOXIDE	000	0.00%	2.28	2.75	9.97	3
TOTAL VOC (INCL LISTED)	000	0.00%	0.38	0.48	1.68	3

THE SUCCESSFUL COMMERCIALISATION OF BENTONITE IN INDIA NO 2530/V0

• Fuel Types/Maximum Heat Input:
(a) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 325 MMBtu/hr (b) GC-1 Process Gas - 325 MMBtu/hr (c) GO-1 Tail Gas - 325 MMBtu/hr (d) PSA Rejected Gas - 325 MMBtu/hr.

One of three zones of burners are equipped with low NO_x burners.

GO-1
7/27/2001

7/27/2001

2520-V2

Department of Environmental Quality		Air Quality Division P.O. Box 44988 Baton Rouge, LA 70804 (225) 765-0102		SHELL CHEMICAL LP		NORCO CHEMICAL PLANT - EAST SITE		NORCO, LA		Date of Submittal JULY 1999				
Company Name		Plant location and name (if any)		Location of stack or vent UTM Zone No.		Location of stack or vent UTM Zone No.		Horizontal Coordinate Vertical Coordinate		Operating rate (Max) or tank capacity				
Source ID Number 7-73		Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER, F-132 (GO-1S)		Height of stack above grade (ft) 100.00		Diameter (ft) or stack discharge area (ft ²) 5.00 (ft²)		Stack gas exit temperature (deg F) 650		Stack gas flow at process conditions, not at standard (ft ³ /min) 116224		98.65	N/A	325 MMBtu/hr
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No														Normal Operating Rate
Fuel		Type of fuel used and heat input		Operating Characteristics		Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point				
		Type of fuel • See Note Below		Heat Input (MMBTU/hr) 0.00		Dec-Feb Mar-May		Jun-Aug 25		Sep-Nov 25		Holiday 25		days/wk 7
														269.00
														MMBTu/hr
Air Pollutant Specific Information														
Pollutant		Control Equipment Code		Control Equipment Efficiency (%)		Emission Rate		Emission Estimation Method		Add, Change, or Delete Code		Concentration of gases exiting at stack		
CARBON MONOXIDE		000		0.00%		Average (lb/ft ³) 8.13		Maximum (lb/ft ³) 8.92		Annual (ton/yr) 35.63		5		
NITROGEN OXIDES		--		0.00%		108.56		117.52		475.48		5		
PARTICULATE MATTER		000		0.00%		3.44		4.16		15.08		3		
SULFUR DIOXIDE		000		0.00%		2.28		2.75		9.97		3		
TOTAL VOC (INCL. LISTED)		000		0.00%		0.58		0.68		2.55		3		
1,3-BUTADIENE		000		0.00%		0.004		0.004		0.02		3		
BENZENE		000		0.00%		0.01		0.01		0.03		3		

This document contains neither recommendations nor conclusions of EPA. It has been reviewed by EPA's Office of Water and approved for external distribution.

(d) PSA Reject Gas - 325 MMBtu/hr (e) GO-1 Tail Gas - 325 MMBtu/hr (f) GO-1 Process Gas - 325 MMBtu/hr (g) NAC Reburner - 325 MMBtu/hr (h) NAC Burner - 325 MMBtu/hr (i) NAC Preheat - 325 MMBtu/hr (j) NAC Air - 325 MMBtu/hr (k) NAC Air - 325 MMBtu/hr (l) NAC Air - 325 MMBtu/hr (m) NAC Air - 325 MMBtu/hr (n) NAC Air - 325 MMBtu/hr (o) NAC Air - 325 MMBtu/hr (p) NAC Air - 325 MMBtu/hr (q) NAC Air - 325 MMBtu/hr (r) NAC Air - 325 MMBtu/hr (s) NAC Air - 325 MMBtu/hr (t) NAC Air - 325 MMBtu/hr (u) NAC Air - 325 MMBtu/hr (v) NAC Air - 325 MMBtu/hr (w) NAC Air - 325 MMBtu/hr (x) NAC Air - 325 MMBtu/hr (y) NAC Air - 325 MMBtu/hr (z) NAC Air - 325 MMBtu/hr

GO-1
7/27/2001

This document was downloaded by member in Part 70 At Part II No. 2520-VG.

Gas source was previously mentioned in our previous slide. The
Fuel Types/Magnitude Heat Input
 (a) 25% Compressed Fuel Gas 75% GO-1 Tail Gas
 (b) 25% MMBtu/hr
 (c) 325 MMBtu/hr
 (d) 325 MMBtu/hr

GO-1
7/27/2001

7/27/2001

2520-V2

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name

SHELL CHEMICAL LP

Date of Submittal

JULY 1999

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

Location of stack or vent

NORCO, LA

Source ID Number

9-73

Descriptive name of the equipment served by this stack or vent

PYROLYSIS HEATER, F-134 (GO-1S)

UTM Zone No.

X

Horizontal Coordinate

15

Vertical Coordinate

16

Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point				Normal operating time of this point	Normal Operating Rate
	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov		
a	* See Note Below	0.00		25	25	25	25	hrs/day	days/wk
								Wks/yr	MMBTU/hr

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
CARBON MONOXIDE	000	0.00%	8.13	8.92	35.83	5		
NITROGEN OXIDES	--	0.00%	108.56	117.52	475.49	5		
PARTICULATE MATTER	000	0.00%	3.44	4.16	15.08	3		
SULFUR DIOXIDE	000	0.00%	2.28	2.75	9.97	3		
TOTAL VOC (INCL. LISTED)	000	0.00%	0.58	0.66	2.55	3		
1,3-BUTADIENE	000	0.00%	0.004	0.004	0.02	3		
BENZENE	000	0.00%	0.01	0.01	0.03	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input

(b) 25% Complex Fuel Gas, 75% GO-1 Tail Gas - 325 MMBtu/hr

(c) GO-1 Process Gas - 325 MMBtu/hr

(d) PSA Reject Gas - 325 MMBtu/hr

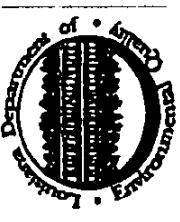
** One of three zones of burners is equipped with low NOx burners.

Department of Environmental Quality		SINGLE POINT/AREA VOLUME SOURCE							
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ) for Air Pollutants							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999							
Source ID Number 10-73	Descriptive name of the equipment served by this stack or vent CONVERTER REGENERATION KNOCK OUT DRUM VENT PV-1634 (GO-1S)	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate mE mN						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 0.83 (ft) (ft²)	Stack gas exit temperature (Deg F) 220	Stack gas flow at process conditions, not at standard (ft ³ /min) 1886	Stack gas exit velocity (ft/sec) 61.2	Date of construction / modification N/A	Operating rate (Max) or tank capacity 4800 lb/hr		
Fuel	Type of fuel a N/A	Type of fuel used and heat input Heat Input (MMBTU/hr)		Operating Characteristics Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25	Normal operating time of this point hrs/day 24	Normal Operating Rate wks/yr 52
Air Pollutant Specific Information	Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lb/hr)	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add. Change, or Delete Code	Concentration of Gases exiting at stack
CARBON MONOXIDE	000	0.00%	0.29	2.88	-0.41	5			

This source was previously permitted in Part 70 Air Permit No. 2520-VO.

Department of Environmental Quality Air Quality Division P.O.Box 44096 Baton Rouge, LA 70804 (225) 765-0102		 LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name SHELL CHEMICAL LP	Source ID Number 1008-95	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	
		Horizontal Coordinate 3321639 mN	
		Vertical Coordinate 750242 mE	
		Operating rate (Max) or tank capacity 2121.9 gal	
		Date of construction / modification 1968	
		Normal operating time of this point wkly/yr	
		Normal Operating Rate 60,000.00 bbl/yr	
Type of fuel used and heat input		Operating Characteristics	
Fuel	Type of fuel a N/A	Heat Input (MMBTU/hr)	Dec-Feb 25
		Mar-May 25	Mar-Aug 25
		Sep-Nov 25	hrs/day 24
			days/wk 7
			wkly/yr 52
Air Pollutant Specific Information		Concentration of gases exiting at stack	
Pollutant	Control Equipment Code	Emission Rate	Add, Change, or Delete Code
TOTAL VOC (INCL. LISTED)	000	Average (lbs/hr) 0.00%	Emission Estimation Method Annual (ton/yr) 3
BENZENE	000	0.00% <0.001	<0.01

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

 <p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>		<p>Date of Submittal JULY 1999</p>																																	
<p>Company Name SHELL CHEMICAL LP</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																																	
<p>Source ID Number 1010-95</p>		<p>Descriptive name of the equipment served by this stack or vent TANK B-480 FIXED ROOF</p>																																	
<p>Stack and Discharge Physical Characteristics <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>		<p>Height of stack above grade (ft) 31.00</p>	<p>Diameter (ft) or stack discharge area (ft²) N/A (ft²)</p>																																
		<p>Stack gas exit temperature (Deg F) N/A</p>	<p>Stack gas flow at process conditions, not at standard (ft³/min) N/A</p>																																
		<table border="1"> <thead> <tr> <th colspan="2">Type of fuel used and heat input</th> <th colspan="2">Operating Characteristics</th> </tr> <tr> <th>Fuel</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Dec-Feb</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td></td> <td>Mar-May</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Jun-Aug</td> </tr> <tr> <td></td> <td></td> <td></td> <td>Sep-Nov</td> </tr> </tbody> </table>		Type of fuel used and heat input		Operating Characteristics		Fuel	Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	a	N/A		Mar-May				Jun-Aug				Sep-Nov												
Type of fuel used and heat input		Operating Characteristics																																	
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb																																
a	N/A		Mar-May																																
			Jun-Aug																																
			Sep-Nov																																
		<table border="1"> <thead> <tr> <th colspan="2">Air Pollutant Specific Information</th> <th colspan="2">Emission Rate</th> <th colspan="2">Add, Change, or Delete Code</th> <th colspan="2">Concentration of gases exiting at stack</th> </tr> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th></th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.01</td> <td>0.03</td> <td>0.05</td> <td>3</td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> </tr> </tbody> </table>		Air Pollutant Specific Information		Emission Rate		Add, Change, or Delete Code		Concentration of gases exiting at stack		Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method		TOTAL VOC (INCL. LISTED)	000	0.00%	0.01	0.03	0.05	3		NAPHTHALENE	000	0.00%	<0.001	0.001	<0.01	3	
Air Pollutant Specific Information		Emission Rate		Add, Change, or Delete Code		Concentration of gases exiting at stack																													
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method																													
TOTAL VOC (INCL. LISTED)	000	0.00%	0.01	0.03	0.05	3																													
NAPHTHALENE	000	0.00%	<0.001	0.001	<0.01	3																													

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality			
Air Quality Division P.O. Box 440986 Baton Rouge, LA 70804 (225) 765-0102			
SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
Source ID Number 1052-95	Descriptive name of the equipment served by this stack or vent TANK K-462 FIXED ROOF		
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 13.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A
			Stack gas flow at process conditions, not at standard (ft ³ /min) N/A
			Stack gas exit velocity (ft/sec) N/A
Type of fuel used and heat input		Operating Characteristics	
Fuel a	Type of fuel N/A	Heat Input (MMBTU/hr)	Percent of annual throughput of pollutants through this emission point Dec-Feb 25
			Mar-May 25
			Jun-Aug 25
			Sep-Nov 25
			Normal operating time of this point hrs/day 24
			Normal Operating Rate days/wk 7
			wks/yr 52
			bbl/yr 528.00
			-
Air Pollutant Specific Information		Control Equipment Code	Emission Rate
Pollutant	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)
		Annual (tons/yr)	Annual (tons/yr)
TOTAL VOC (INCL. LISTED)	0.00%	0.01	9.02
METHANOL	0.00%	0.01	9.02
		0.05	0.05
		3	3
		Add, Change, or Delete Code	Concentration of gases exiting at stack

METHANOL
This solvent was determined to be 70 Alk Resistant at 3620 °C

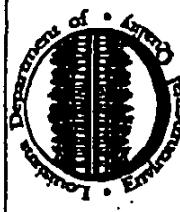
Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA							
SINGLE POINT/AREA/VOLUME SOURCE							
Emission Inventory Questionnaire (EIQ)							
for Air Pollutants							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA						
Source ID Number 1076-95	Descriptive name of the equipment served by this stack or vent TANK B-478 FIXED ROOF						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 14.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification 1966	Operating rate (Max) or tank capacity 11844 gal

Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point				Normal operating time of this point				Nominal Operating Rate
	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr		
<input type="checkbox"/> Gas	N/A	25	25	25	25	24	7	52	1,857.00	bbl/yr		

Air Pollutant Specific Information	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Annual Emission Rate	Add, Change, or Delete Code	Concentration of gases exiting at stack	
Pollutant			Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)		
TOTAL VOC (INCL LISTED)	000	0.00%	<0.001	<0.001	<0.01	3	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 44086 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants							
 Company Name SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA Date of Submittal JULY 1998							
Source ID Number 1077-95		Descriptive name of the equipment served by this stack or vent TANK M-420 FIXED ROOF							
Stack and Discharge Physical Characteristics <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Height of stack above grade (ft) 20.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) <small>(ft²)</small>						
		Stack gas exit temperature (Deg F) N/A	Stack gas exit velocity (ft/sec) <small>(ft³/min)</small> N/A						
		Type of fuel used and heat input	Operating Characteristics						
Fuel	Type of fuel <input checked="" type="checkbox"/> a N/A	Heat Input (MMBTU/hr)	Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25 hrs/day						
			Normal operating time of this point days/wk 52						
Air Pollutant Specific Information		Pollutant Control Equipment Code TOTAL VOC (INCL LISTED)		Emission Rate Average (lbs/hr) 0.000%	Maximum (lbs/hr) <0.001	Annual (tons/yr) <0.001	Emission Estimation Method 3	Add, Change, or Delete Code 3	Concentration of gases exiting at stack

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44098
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name

SHELL CHEMICAL LP

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

NORCO, LA

Date of Submission

JULY 1999

Source ID Number

1090-95

Descriptive name of the equipment served by this stack or vent

TANK W-413 FIXED ROOF

Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Type of fuel used and heat input			Operating Characteristics			Percent of annual throughput of pollutants through this emission point			Normal operating time of this point			Normal Operating Rate		
	Fuel	Type of fuel	Heat Input (MMBTU/hr)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (F@30min)	Stack gas exit velocity (ft/sec)	UTM Zone No.	Horizontal Coordinate	Vertical Coordinate	Date of construction / modification	Operating rate (Max) or tank capacity				
a	N/A	N/A	N/A (ft ²)	N/A (ft)	N/A	N/A	X	15	16	1953	21140 gal				

Air Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate			Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
			Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)			
TOTAL VOC (INCL LISTED)	000	0.00%	0.05	5.28	0.24	3		
BENZENE	000	0.00%	<0.001	0.002	<0.01	3		
ETHYL BENZENE	000	0.00%	<0.001	0.003	<0.01	3		
NAPHTHALENE	000	0.00%	<0.001	<0.001	<0.01	3		
TOLUENE	000	0.00%	0.001	0.06	<0.01	3		
XYLENE (MIXED ISOMERS)	000	0.00%	<0.001	0.04	<0.01	3		

This source was previously permitted in Part 70 Air Permit No. 2320-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44098
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA
SINGLE POINT/AREAL VOLUME SOURCE
 Emission Inventory Questionnaire (EIQ)
 for Air Pollutants

Company Name

SHELL CHEMICAL LP

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

NORCO, LA

Date of Submittal

JULY 1999

Descriptive name of the equipment served by this stack or vent

TANK PV-274 FIXED ROOF

Location of stack or vent

UTM Zone No.

Horizontal Coordinate

Vertical Coordinate

mE

mN

UTM Zone No.

X

15

16

Horizontal Coordinate

Vertical Coordinate

3321535

mN

Stack gas exit velocity (ft/sec)

Stack gas flow at process conditions, not at standard (ft³/min)

N/A

N/A

Stack gas exit velocity (ft/sec)

N/A

Stack gas exit velocity (ft/sec)

N/A

GO-1

7/27/2001

2520-V2

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

 <p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA						
Source ID Number 1105-95	Descriptive name of the equipment served by this stack or vent TANK PV-1666 FIXED ROOF						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 10.00 Diameter (ft) or stack discharge area (ft^2) N/A (ft) (ft^2)						
Fuel	Type of fuel a N/A						
Type of fuel used and heat input Heat Input (MMBTU/hr)							
Operating Characteristics							
Percent of annual throughput of pollutants through this emission point							
Dec-Feb Mar-May Jun-Aug Sep-Nov							
25 25 25 25							
hrs/day days/wk wks/yr							
24 7 52							
Normal operating time of this point							
Normal Operating Rate							
150.00 bbl/yr							
Air Pollutant Specific Information							
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
SULFURIC ACID	000	0.00%	0.003	3.61	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 4098 Baton Rouge, LA 70804 (225) 765-0102		 LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999																																							
Source ID Number 1243.96	Description of the equipment served by this stack or vent TANK F-483 EXTERNAL FLOATING ROOF	Location of stack or vent <input checked="" type="checkbox"/> 15 Horizontal Coordinate <input type="checkbox"/> 16 Vertical Coordinate UTM Zone No. Stack gas flow at process conditions, not at standard (N/A) Stack gas exit velocity (ft/sec) Date of construction / modification N/A N/A Operating rate (Max) or tank capacity 3383900 gal																																							
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00 Diameter (ft) or stack discharge area (ft ²) 120.00 (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (N/A) N/A Stack gas exit velocity (ft/sec) N/A Date of construction / modification N/A N/A Operating rate (Max) or tank capacity 3383900 gal																																						
Fuel a	Type of fuel N/A	Type of fuel used and heat input Operating Characteristics	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	Normal operating time of this point hrs/day 7.600.000.00 bbl/yr	Normal Operating Rate																																				
			Mar-May 25	hrs/day 7.600.000.00 bbl/yr																																					
			Jun-Aug 25	hrs/day 7.600.000.00 bbl/yr																																					
			Sep-Nov 25	hrs/day 7.600.000.00 bbl/yr																																					
			24	hrs/day 7.600.000.00 bbl/yr																																					
			52	hrs/day 7.600.000.00 bbl/yr																																					
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Emission Rate</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>*</td> <td>0.00%</td> <td>Average (lbs/hr) 1.05</td> <td>Maximum (tenshr) 4.62</td> <td>3</td> </tr> <tr> <td>BENZENE</td> <td>*</td> <td>0.00%</td> <td>0.003</td> <td>0.01</td> <td>3</td> </tr> <tr> <td>ETHYL BENZENE</td> <td>*</td> <td>0.00%</td> <td>0.003</td> <td>0.01</td> <td>3</td> </tr> <tr> <td>TOLUENE</td> <td>*</td> <td>0.00%</td> <td>0.003</td> <td>0.01</td> <td>3</td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>*</td> <td>0.00%</td> <td>0.004</td> <td>0.02</td> <td>3</td> </tr> </tbody> </table> <p>EIQ revised per approved Change of Tank Service 7/31/2000. See File 705-01-03a (2520-V). *External Floating Roof (See calculations for seal types/factors)</p>						Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	TOTAL VOC (INCL. LISTED)	*	0.00%	Average (lbs/hr) 1.05	Maximum (tenshr) 4.62	3	BENZENE	*	0.00%	0.003	0.01	3	ETHYL BENZENE	*	0.00%	0.003	0.01	3	TOLUENE	*	0.00%	0.003	0.01	3	XYLENE (MIXED ISOMERS)	*	0.00%	0.004	0.02	3
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code																																				
TOTAL VOC (INCL. LISTED)	*	0.00%	Average (lbs/hr) 1.05	Maximum (tenshr) 4.62	3																																				
BENZENE	*	0.00%	0.003	0.01	3																																				
ETHYL BENZENE	*	0.00%	0.003	0.01	3																																				
TOLUENE	*	0.00%	0.003	0.01	3																																				
XYLENE (MIXED ISOMERS)	*	0.00%	0.004	0.02	3																																				

Department of Environmental Quality							
Air Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102							
LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA						
Source ID Number 1244-95	Descriptive name of the equipment served by this stack or vent TANK F-494 EXTERNAL FLOATING ROOF						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 160.00 (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification 1975	Operating rate (Max) or tank capacity 6537400 gal
Fuel a	Type of fuel N/A	Type of fuel used and heat input Heat Input (MMBTU/hr)		Operating Characteristics		Normal operating time of this point hrs/day days/wk wks/yr	Normal Operating Rate 5,022,072 2,760,000.00
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov		
		25	25	25	25	24	7
						52	

Air Pollutant Specific Information		Control Equipment Codes	Control Efficiency (%)	Average (lbs/hr)	Emission Rate	Annual Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)		•	0.00%	4.69	4.69	20.10	3	Change		
BENZENE		•	0.00%	0.01	0.01	0.05	3			
ETHYL BENZENE		•	0.00%	0.003	0.003	0.01	3			
HEXANE (< N)		•	0.00%	0.51	0.51	2.24	3			
HYDROGEN SULFIDE		•	0.00%	0.01	0.01	0.07	3	Add		
TOLUENE		•	0.00%	0.01	0.01	0.03	3			
XYLENE (MIXED ISOMERS)		•	0.00%	0.003	0.003	0.02	3			

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
External Floating Roof (See calculations for seal types/factors)

* Correct value is 5.5 mm bbl/hr. Per
12/2/98 chg of Tank Service & per
mcm in app'd to modify 2520-V0 of 6/30/99.
Emissions limits shown are
consistent w/ 5.5 mm bbl/hr. *Per*
6/11/04

2520-V2

GO-1

7/27/2001

Department of Environmental Quality		SINGLE POINT/AREA/VOLUME SOURCE				
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ) for Air Pollutants				
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Date of Submittal JULY 1999				
Source ID Number 1264-95	Descriptive name of the equipment served by this stack or vent TANK K-478 INTERNAL FLOATING ROOF	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate mE 3321317			
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 30.00	Diameter (ft) or stack discharge area (ft ²) 60.00 (ft ²)	Stack gas exit temperature (Deg F) N/A			
		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A			
			Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25			
			Date of construction / modification 1968 N/A			
			Normal operating time of this point hrs/day wks/yr 375.430.00 52 bbls/yr			
		Operating Rate				
Fuel	Type of fuel a N/A	Heat Input (MMBTU/hr)	Operating Characteristics Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25			
Type of fuel used and heat input						
Air Pollutant Specific Information						
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	
TOTAL VOC (INCL LISTED)	-	0.00%	Average (lbs/hr) 0.56	Maximum (lbs/hr) 0.56	Annual (ton/yr) 2.46	3
BENZENE	-	0.00%	0.01	0.01	0.04	3
ETHYLBENZENE	-	0.00%	<0.001	<0.001	<0.01	3
HEXANE (-N)	-	0.00%	0.001	0.001	<0.01	3
STYRENE	-	0.00%	<0.001	<0.001	<0.01	3
TOLUENE	-	0.00%	0.01	0.01	0.02	3
Xylenes (MIXED ISOMERS)	-	0.00%	0.001	0.001	0.01	3

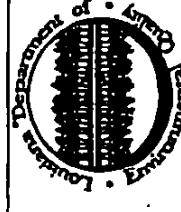
This source was previously permitted in Part 70 Air Permit No. 2520-VO.
Internal Floating Roof (See calculations for seal types/factors)

三

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 785-0102

LOUISIANA

SINGLE POINT/AEROVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

											
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA										
Source ID Number 2003-95	Descriptive name of the equipment served by this stack or vent COOLING WATER TOWER-J6 GO-1 S										
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<table border="1"> <tr> <td>Height of stack above grade (ft) 37.50</td> <td>Diameter (ft) or stack discharge area (ft²) N/A. (ft) 186 (ft²)</td> <td>Stack gas exit temperature (Deg F) 110</td> <td>Stack gas flow at process conditions, not at standard (ft³/min) 428144</td> <td>Stack gas exit velocity (ft/sec) 15.38</td> <td>Percent of annual throughput of pollutants through this emission point Dec-Feb 25 Mar-May 25 Jun-Aug 25</td> <td>Normal operating time of this point Sep-Nov 25 hrs/day 24 days/wk 7 wks/yr 52</td> <td>Date of construction / modification N/A</td> <td>Operating rate (Max) or tank capacity 40000 gpm</td> <td>Normal Operating Rate 40,000.00 gpm</td> </tr> </table>	Height of stack above grade (ft) 37.50	Diameter (ft) or stack discharge area (ft ²) N/A. (ft) 186 (ft ²)	Stack gas exit temperature (Deg F) 110	Stack gas flow at process conditions, not at standard (ft ³ /min) 428144	Stack gas exit velocity (ft/sec) 15.38	Percent of annual throughput of pollutants through this emission point Dec-Feb 25 Mar-May 25 Jun-Aug 25	Normal operating time of this point Sep-Nov 25 hrs/day 24 days/wk 7 wks/yr 52	Date of construction / modification N/A	Operating rate (Max) or tank capacity 40000 gpm	Normal Operating Rate 40,000.00 gpm
Height of stack above grade (ft) 37.50	Diameter (ft) or stack discharge area (ft ²) N/A. (ft) 186 (ft ²)	Stack gas exit temperature (Deg F) 110	Stack gas flow at process conditions, not at standard (ft ³ /min) 428144	Stack gas exit velocity (ft/sec) 15.38	Percent of annual throughput of pollutants through this emission point Dec-Feb 25 Mar-May 25 Jun-Aug 25	Normal operating time of this point Sep-Nov 25 hrs/day 24 days/wk 7 wks/yr 52	Date of construction / modification N/A	Operating rate (Max) or tank capacity 40000 gpm	Normal Operating Rate 40,000.00 gpm		
Fuel a	Type of fuel N/A	Type of fuel used and heat input Heat Input (MMBTU/hr)	Operating Characteristics								

Air Pollutant Specific Information	Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Emission Rate	Annual Maximum (lbs/hr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
PARTICULATE MATTER	-	0.00%	0.00%	1.19	1.19	5.21	3		
TOTAL VOC (INCL. LISTED)	-	0.00%	0.00%	1.68	1.68	7.36	3		
1,3-BUTADIENE	-	0.00%	0.00%	0.03	0.03	0.11	3		
AMMONIA	-	0.00%	0.00%	0.002	0.002	0.01	3		
BENZENE	-	0.00%	0.00%	0.01	0.01	0.02	3		
HEXANE (-N)	-	0.00%	0.00%	0.01	0.01	0.03	3		
NAPHTHALENE	-	0.00%	<0.001	<0.001	<0.001	<0.01	3		
TOLUENE	-	0.00%	<0.001	<0.001	<0.001	<0.01	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
 • Monitoring Program

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																																									
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Date of Submittal JULY 1999																																																																									
Source ID Number 2004-95	Descriptive name of the equipment served by this stack or vent COOLING WATER TOWER-07 GO-1 N		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16																																																																								
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 65.33	Diameter (ft) or stack discharge area (ft ²) N/A (ft) 158.3 (ft²)	Stack gas exit temperature (Deg F) 110																																																																								
	Stack gas flow at process conditions, not at standard (ft ³ /min) 908592	Stack gas exit velocity (ft/sec) 57.26	Stack gas exit velocity (ft/sec) 57.26																																																																								
		Operating Characteristics	Date of construction / modification N/A																																																																								
Fuel	Type of fuel N/A	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov .25 .25 .25 .25	Normal operating time of this point hrs/day 24 7 52																																																																								
	Heat Input (MMBTU/hr)	Normal operating time of this point days/wk 62,720.00 gpm	Normal Operating Rates 62,720.00 gpm																																																																								
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average Emission Rate (lbs/hr)</th> <th>Maximum Emission Rate (lbs/hr)</th> <th>Annual Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>PARTICULATE MATTER</td> <td>-</td> <td>0.00%</td> <td>1.87</td> <td>1.87</td> <td>8.17</td> <td>3</td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>-</td> <td>0.00%</td> <td>2.63</td> <td>2.63</td> <td>11.54</td> <td>3</td> <td></td> </tr> <tr> <td>1,3-BUTADIENE</td> <td>-</td> <td>0.00%</td> <td>0.092</td> <td>0.092</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>BENZENE</td> <td>-</td> <td>0.00%</td> <td>0.01</td> <td>0.01</td> <td>0.03</td> <td>3</td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>-</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> </tr> <tr> <td>STYRENE</td> <td>-</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>-</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td>0.02</td> <td>3</td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>-</td> <td>0.00%</td> <td>0.005</td> <td>0.005</td> <td>0.02</td> <td>3</td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	PARTICULATE MATTER	-	0.00%	1.87	1.87	8.17	3		TOTAL VOC (INCL. LISTED)	-	0.00%	2.63	2.63	11.54	3		1,3-BUTADIENE	-	0.00%	0.092	0.092	0.01	3		BENZENE	-	0.00%	0.01	0.01	0.03	3		NAPHTHALENE	-	0.00%	<0.001	<0.001	<0.01	3		STYRENE	-	0.00%	0.001	0.001	0.01	3		TOLUENE	-	0.00%	0.001	0.001	0.02	3		XYLENE (MIXED ISOMERS)	-	0.00%	0.005	0.005	0.02	3	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																				
PARTICULATE MATTER	-	0.00%	1.87	1.87	8.17	3																																																																					
TOTAL VOC (INCL. LISTED)	-	0.00%	2.63	2.63	11.54	3																																																																					
1,3-BUTADIENE	-	0.00%	0.092	0.092	0.01	3																																																																					
BENZENE	-	0.00%	0.01	0.01	0.03	3																																																																					
NAPHTHALENE	-	0.00%	<0.001	<0.001	<0.01	3																																																																					
STYRENE	-	0.00%	0.001	0.001	0.01	3																																																																					
TOLUENE	-	0.00%	0.001	0.001	0.02	3																																																																					
XYLENE (MIXED ISOMERS)	-	0.00%	0.005	0.005	0.02	3																																																																					

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
• Monitoring Program

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
"Leak Detection and Repair Program"

T-peak Duration and Basal Erratum

GO-1
1227/2001

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

	
Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
Date of Submittal JULY 1999	
Company Name SHELL CHEMICAL LP	
Source ID Number 3110-95	
Descriptive name of the equipment served by this stack or vent OIL WATER SEPARATOR GO1 SOUTH API	
Height of stack above grade (ft) 3.00	
Diameter (ft) or stack discharge area (ft²) N/A (ft²)	
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> No	

Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate		
Fuel <input checked="" type="checkbox"/> a	Type of fuel N/A	Heat Input (MMBTU/hr)		Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25	hrs/day 7	days/yr 52	wk/yr 191.00
										gpm 191 gpm
Air Pollutant Specific Information										
Pollutant		Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	
TOTAL VOC (INCL. LISTED)		000	0.00%	9.80	19.60	42.92	4			
BENZENE		000	0.00%	0.002	0.003	0.01	4			
NAPHTHALENE		000	0.00%	<0.001	<0.001	<0.01	4			
XYLENE (MIXED ISOMERS)		000	0.00%	<0.001	<0.001	<0.01	4			

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

*Unit was constructed in 1977 prior to the May 4, 1987 NSPS, Subpart QQ applicability date and has not been modified or reconstructed since construction.

Department of Environmental Quality		SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants									
Air Quality Division P. O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Date of Submittal JULY 1999									
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA										
Source ID Number 3206-95	Descriptive name of the equipment served by this stack or vent GO-1 UNIT WASTEWATER EMISSIONS			Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15		Horizontal Coordinate Vertical Coordinate <input checked="" type="checkbox"/> 16		Operating rate (Max) or tank capacity mE mN			
Stack and Discharge Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) N/A	Diameter (ft) or stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification N/A	Normal operating time of this point N/A	Normal Operating Rate			
Fuel	Type of fuel Heat Input (MMBTU/hr) a N/A	Type of fuel Heat Input (MMBTU/hr) N/A	Operating Characteristics	Percent of annual throughput of pollutants through this emission point Dec-Feb 25	Percent of annual throughput of pollutants through this emission point Mar-May 25	Percent of annual throughput of pollutants through this emission point Jun-Aug 25	Percent of annual throughput of pollutants through this emission point Sep-Nov 25	Percent of annual throughput of pollutants through this emission point Nov/Jan 24	Percent of annual throughput of pollutants through this emission point Wk/yr 7	Percent of annual throughput of pollutants through this emission point Continuous 52	
Air Pollutant Specific Information											
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack					
TOTAL VOC (INCL LISTED)	000	0.00%	Average (lb/hr) 26.51	Maximum (lb/hr) 29.51	Annual (ton/yr) 129.24	3					
BENZENE	000	0.00%	0.02	0.02	0.09	3					
ETHYL BENZENE	000	0.00%	0.03	0.27	0.12	3					
NAPHTHALENE	000	0.00%	0.004	0.004	0.02	3					
TOULUENE	000	0.00%	0.54	0.54	2.35	3					
XYLO FAME, DIAKED ISOPROPENE	000	0.00%	0.37	0.37	1.60	3					

This source was previously permitted in Part 70 Air Permit No. 2520-VD.
"Unit was constructed in 1977 prior to the May 4, 1987 NSPS. Subpart QQQ applicability date and has not been modified or reconstructed since construction.

This section was previously published in Part 70 of Permit No. 2520-VG.

Department of Environmental Quality		Louisiana		Single Point/Area Volume Source		Emission Inventory Questionnaire (EIQ)		State of Louisiana	
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102									
Company Name SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA		Location of stack or vent <input checked="" type="checkbox"/> UTM Zone No. X		Horizontal Coordinate 15 Vertical Coordinate 16		Date of Submittal JULY 1999	
Source ID Number 5004-97		Descriptive name of the equipment served by this stack or vent PYROLYSIS HEATER, F-177 (GO-1S)		Height of stack above grade (ft) 150.00		Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) 40.38 (ft²)		Stack gas exit temperature (Deg F) 400	
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						Stack gas flow at process conditions, not at standard (ft ³ /min) 110036		Stack gas exit velocity (ft/sec) 45.42	
								Operating rate (Max) or tank capacity 386 MMBtu/hr	
								Normal operating time of this point Normal Operating Rate	
						Percent of annual throughput of pollutants through this emission point Dec-Feb 25		Normal operating time of this point Mar-May 25	
						Percent of annual throughput of pollutants through this emission point Jun-Aug 25		Normal operating time of this point Sep-Nov 25	
								Normal operating time of this point Nov-Mar 7	
								Normal operating time of this point Wk/yr 52	
								Normal operating time of this point MMBtu/hr 330.00	
Air Pollutant Specific Information									
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Average (lb/hrs)	Maximum (lb/hrs)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
CARBON MONOXIDE	000	0.00%	4.84	5.43	20.32	5			
NITROGEN OXIDES	**	0.00%	26.40	30.89	115.63	5			
PARTICULATE MATTER	000	0.00%	4.23	4.95	18.54	3			
SULFUR DIOXIDE	000	0.00%	12.68	14.21	55.47	1.3			
TOTAL VOC (INCL LISTED)	000	0.00%	0.63	0.70	2.74	3			

This document was automatically generated in Bdt 70 Air Berth # No. 2520 V0

* This source was previously reported in Part IV of this Form 10-K.

Gas - 388 MMBtu/hr.
" Equivalent with low NO_x burner.

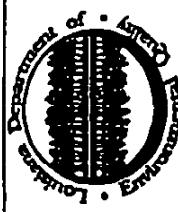
כָּלְבָּנָן מִתְּבָּנָן

7/27/2001

۱۰

2520-V2

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name
SHELL CHEMICAL LP

Date of Submittal

JULY 1999

NORCO, LA

Plant location and name (if any)

Date of Submittal

JULY 1999

NORCO CHEMICAL PLANT - EAST SITE

Location of stack or vent

Date of Submittal

JULY 1999

UTM Zone No.

Date of Submittal

JULY 1999

X 15

Date of Submittal

JULY 1999

Vertical Coordinate

Date of Submittal

JULY 1999

N/A

Date of Submittal

JULY 1999

Operating rate (Max.)

Date of Submittal

JULY 1999

or tank capacity

Date of Submittal

JULY 1999

385 MMBtu/hr

Source ID Number	Descriptive name of the equipment served by this stack or vent
7-76	PYROLYSIS FURNACE, F-141 (OL-5)

Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft)	Diameter (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)	Slack Gas exit velocity (ft/sec)	Date of construction / modification	Operating Characteristics		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Nominal Operating Rate
							Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	
	150.00	7.17 (ft) (ft ²)	400	110640	45.67	N/A	25	25	25	24	7
											52

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of Bases exiting at stack
CARBON MONOXIDE	000	0.00%	7.50	8.28	32.87	5		
NITROGEN OXIDES	"	0.00%	78.70	83.18	344.71	5		
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3		
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3		
TOTAL VOC (INCL LISTED)	000	0.00%	0.48	0.54	2.03	3		

This source was previously permitted in Part 70 Air Permit No. 2620-V0.

* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr

** Two of three zones of burners are equipped with low NOx burners.

This source was previously permitted in Part 70 Air Permit No. 2520-VQ.

* Fuel Types/Maximum Heat Input: (a) OL-3 Process Gas - 385 MMBtu/h

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102

Louisiana		Single Point/Area/Volume Source Emission Inventory Questionnaire (EIQ) for Air Pollutants									
		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA									
		Date of Submittal JULY 1999									
Source ID Number 10-76		Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-144 (OL-5)		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16		Horizontal Coordinate 751170 mE		Vertical Coordinate 3321492 mN			
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft²) 7.17 (ft) (ft²)	Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft³/min) 110640	Stack gas exit velocity (ft/sec) 45.67	Date of construction / modification N/A	Operating rate (Max) or tank capacity 385 MMBtu/hr			
		Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov		Normal operating time of this point hrs/day days/wk yrs/yr			
Fuel a * See Note Below		Type of fuel Heat Input (MMBTU/hr) 0.00		25 25 25 25		25 25 24 24		7 52 329.00 MMBtu/hr			
Air Pollutant Specific Information											
Pollutant		Control Equipment Code	Control Efficiency (%)	Emission Rate	Annual Estimation Method	Add, Change, or Delete Code					
CARBON MONOXIDE		000	0.00%	7.50	8.29	Concentration of gases exiting at stack 32.87 5					
NITROGEN OXIDES		"	0.00%	78.70	83.18	344.71 5					
PARTICULATE MATTER		000	0.00%	4.21	4.83	18.45 3					
SULFUR DIOXIDE		000	0.00%	4.55	5.33	19.95 3					
TOTAL VOC (INCL. LISTED)		000	0.00%	0.46	0.54	2.03 3					

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr.

" Two of three zones of burners are equipped with low NO_x burners.



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102	<p>Plant location and name (if any)</p> NORCO CHEMICAL PLANT - EAST SITE NORCO, LA							Date of Submittal JULY 1999																																																						
Company Name SHELL CHEMICAL LP	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-145 (OL-5)			Location of stack or vent		UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate mE mN																																																							
Source ID Number 11-76	Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft²) 7.17 (ft) (ft²)	Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft³/min) 110640	Stack gas exit velocity (ft/sec) 4.5-67	Operating rate (Max) or tank capacity N/A	Operating rate (Max) or tank capacity 385 MMBtu/hr																																																							
			Operating Characteristics	Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate																																																								
			Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25	hrs/day 7	wk/yr 52																																																						
			Heat Input (MMBTU/hr) 0.00				MMBTu/hr 329.00																																																							
			Type of fuel a • See Note Below																																																											
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Average (lb/hr)</th> <th>Maximum (lb/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>000</td> <td>0.00%</td> <td>10.40</td> <td>11.19</td> <td>45.56</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>=</td> <td>0.00%</td> <td>131.08</td> <td>135.61</td> <td>574.14</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>000</td> <td>0.00%</td> <td>4.21</td> <td>4.93</td> <td>18.45</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>000</td> <td>0.00%</td> <td>4.55</td> <td>5.33</td> <td>19.95</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.46</td> <td>0.54</td> <td>2.03</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>									Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lb/hr)	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5			NITROGEN OXIDES	=	0.00%	131.08	135.61	574.14	5			PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3			SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3			TOTAL VOC (INCL LISTED)	000	0.00%	0.46	0.54	2.03	3		
Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lb/hr)	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																						
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5																																																								
NITROGEN OXIDES	=	0.00%	131.08	135.61	574.14	5																																																								
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3																																																								
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3																																																								
TOTAL VOC (INCL LISTED)	000	0.00%	0.46	0.54	2.03	3																																																								

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
 *Fuel Type/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr.

** One of three zones of burners is equipped with low NOx burners.

Department of Environmental Quality		SINGAPORE SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																											
 <p>Department of ENVIRONMENTAL QUALITY State of Louisiana</p>		Date of Submittal JULY 1999																																											
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate mE mN																																										
Source ID Number 12-76	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-146 (OL-5)	Stack gas exit temperature (Deg F) 7.17 (R) (F=3min) 400	Stack gas flow at process conditions, not at standard (ft ³ /min) 110840 45.67																																										
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Diameter (ft) or stack discharge area (ft ²) 150.00 7.17 (R) (F=2)	Operating Characteristics Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	Percent of annual throughput of pollutants through this emission point Normal operating time of this point days/wk wkshyr Normal Operating Rate MMBtu/hr 329.00 MMBtu/hr																																										
Fuel	Type of fuel Heat Input (MMBTU/hr) a • See Note Below 0.00																																												
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Emission Rate</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>000</td> <td>0.00%</td> <td>Average (lb/ft³) 10.40</td> <td>Maximum (lb/ft³) 11.18</td> <td>Annual (ton/yr) 45.56</td> <td>5</td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>~</td> <td>0.00%</td> <td>13.08</td> <td>135.81</td> <td>574.14</td> <td>5</td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>000</td> <td>0.00%</td> <td>4.21</td> <td>4.93</td> <td>18.45</td> <td>3</td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>000</td> <td>0.00%</td> <td>4.55</td> <td>5.33</td> <td>19.95</td> <td>3</td> </tr> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.48</td> <td>0.54</td> <td>2.03</td> <td>3</td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	CARBON MONOXIDE	000	0.00%	Average (lb/ft ³) 10.40	Maximum (lb/ft ³) 11.18	Annual (ton/yr) 45.56	5	NITROGEN OXIDES	~	0.00%	13.08	135.81	574.14	5	PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3	SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3	TOTAL VOC (INCL LISTED)	000	0.00%	0.48	0.54	2.03	3
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																							
CARBON MONOXIDE	000	0.00%	Average (lb/ft ³) 10.40	Maximum (lb/ft ³) 11.18	Annual (ton/yr) 45.56	5																																							
NITROGEN OXIDES	~	0.00%	13.08	135.81	574.14	5																																							
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3																																							
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3																																							
TOTAL VOC (INCL LISTED)	000	0.00%	0.48	0.54	2.03	3																																							

This source was previously permitted in Part 70 Air Permit No. 2820-VO.

“ One of three zones of burners is equipped with low NOx burners.

-- One of three zones of burners is equipped with low NO_x burners.

7/27/2001

910



Department of Environmental Quality		LOUISIANA						
Air Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102		SINGLE POINT/AREAL VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	NORCO, LA						
Source ID Number 13-76	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-147 (OL-5)	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16 Horizontal Coordinate 751111 mE Vertical Coordinate 3321410 mN						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft ²)	Stack gas exit temperature (Deg F) 400					
Fuel	Type of fuel a. * See Note Below	Type of fuel used and heat input Heat Input (MMBTU/hr) 0.00						
		Operating Characteristics						
		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov	Normal operating time of this point hrs/day days/wk hrs/yr					
		25 25 25 25	7 62 329.00 MMBtu/hr					
		25 25 25 25	7 62 329.00 MMBtu/hr					
Air Pollutant Specific Information		Concentration of gases exiting at stack						
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lbs/hr)	Emission Rate Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5		
NITROGEN OXIDES	**	0.00%	131.08	135.61	574.14	5		
PARTICULATE MATTER	000	0.00%	4.21	4.83	18.45	3		
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3		
TOTAL VOC (INCL LISTED)	000	0.00%	0.48	0.54	2.03	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel types/maximum heat input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr

** One of three zones of burners is equipped with low NOx burners.

Department of Environmental Quality		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants					
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102							
Company Name SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA					
Source ID Number 14-76		Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-148 (OL-5)					
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) (ft ²)	Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft ³ /min) 110840	Stack gas exit velocity (ft/sec) 45.6	Horizontal Coordinate UTM Zone No. X 15 Vertical Coordinate Y 16
Fuel		Type of fuel used and heat input a * See Note Below	Operating Characteristics Heat Input (MMBTU/hr) 0.00	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25		Normal operating time of this point hrs/day 7	Normal Operating Rate hrs/yr 329.00
Air Pollutant Specific Information		Control Equipment Code 000	Control Equipment Efficiency (%) 0.00%	Average Emission Rate (lbs/hr) 10.40	Maximum Emission Rate (ton/yr) 11.19	Emission Estimation Method 45.56	Add, Change, or Delete Code 5
		CARBON MONOXIDE	0.00%	131.08	135.61	574.14	5
		NITROGEN OXIDES	0.00%	4.21	4.93	18.45	3
		PARTICULATE MATTER	0.00%	4.55	5.33	19.95	3
		SULFUR DIOXIDE	0.00%	0.48	0.54	2.03	3
		TOTAL VOC (INCL. LISTED)	0.00%				

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr

** One of three zones of burners is equipped with low NOx burners.

<p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>	
		Date of Submittal JULY 1999	
<p>Company Name SHELL CHEMICAL LP</p>		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
Source ID Number 15-76		Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-149 (OL-5)	
		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16 Horizontal Coordinate Vertical Coordinate	
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) (ft ²)
		Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft ³ /min) 110840
		Operating Characteristics	
Fuel		Type of fuel used and heat input Type of fuel: * See Note Below 0.00	Heat Input (MMBTU/hr)
		Operating Characteristics	
		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-Apr May-Jun Aug-Sep-Nov	
		Normal operating time of this point hrs/day days/wk wks/yr	
		Normal Operating Rate 329.00 MMBTU/hr	
Air Pollutant Specific Information			
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate
CARBON MONOXIDE	000	0.00%	Average (lbs/hr) 10.40
NITROGEN OXIDES	..	0.00%	Maximum (lbs/hr) 11.19
PARTICULATE MATTER	000	0.00%	Annual (tons/yr) 45.56
SULFUR DIOXIDE	000	0.00%	
TOTAL VOC (INCL LISTED)	000	0.00%	
			Add, Change, or Delete Code
			Concentration of gases exiting at stack

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr
** One of three zones of burners is equipped with low NOx burners.

Department of Environmental Quality Air Quality Division P.O. Box 440986 Baton Rouge, LA 70804 (225) 765-0102		 LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																			
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999																																																			
Source ID Number 16-76	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-150 (OL-5)	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate																																																		
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) (ft ²)	Stack gas exit temperature (Deg F) 400																																																		
Fuel	Type of fuel a * See Note Below	<table border="1"> <thead> <tr> <th colspan="2">Type of fuel used and heat input</th> <th colspan="3">Operating Characteristics</th> <th colspan="3">Percent of annual throughput of pollutants through this emission point</th> <th colspan="3">Normal operating time of this point</th> <th colspan="3">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/yr</th> <th>hrs/day</th> <th>days/yr</th> <th>wks/yr</th> <th>MMBTU/hr</th> </tr> </thead> <tbody> <tr> <td></td> <td>0.00</td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> <td>329.00</td> <td>52</td> <td>MMBTU/hr</td> </tr> <tr> <td></td> </tr> </tbody> </table>		Type of fuel used and heat input		Operating Characteristics			Percent of annual throughput of pollutants through this emission point			Normal operating time of this point			Normal Operating Rate			Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/yr	hrs/day	days/yr	wks/yr	MMBTU/hr		0.00	25	25	25	25	24	7	52	329.00	52	MMBTU/hr												
Type of fuel used and heat input		Operating Characteristics			Percent of annual throughput of pollutants through this emission point			Normal operating time of this point			Normal Operating Rate																																										
Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/yr	hrs/day	days/yr	wks/yr	MMBTU/hr																																										
	0.00	25	25	25	25	24	7	52	329.00	52	MMBTU/hr																																										
Air Pollutant Specific Information	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																													
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5																																															
NITROGEN OXIDES	**	0.00%	131.08	139.61	574.14	5																																															
PARTICULATE MATTER	000	0.00%	4.21	4.83	18.45	3																																															
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.85	3																																															
TOTAL VOC (INCL LISTED)	000	0.00%	0.48	0.54	2.03	3																																															

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr

** One of three zones of burners is equipped with low NOx burners.

<p>Department of Environmental Quality Air Quality Division P.O. Box 44056 Baton Rouge, LA 70804 (225) 765-0102</p> <p>SHELL CHEMICAL LP</p>		<p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																									
		<p>Plant location and name (if any) NORCO, LA</p> <p>Date of Submittal JULY 1999</p>																																																									
<p>Source ID Number 17-76</p> <p>Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-161 (OL-5)</p>		<table border="1"> <thead> <tr> <th colspan="2">Location of stack or vent</th> <th colspan="2">Horizontal Coordinate</th> <th colspan="2">Operating rate (Max) or tank capacity</th> </tr> <tr> <th colspan="2">UTM Zone No.</th> <th>X</th> <th>15</th> <th colspan="2">mE</th> </tr> <tr> <th colspan="2">UTM Zone No.</th> <th><input checked="" type="checkbox"/></th> <th>16</th> <th colspan="2">mN</th> </tr> </thead> <tbody> <tr> <td colspan="2">Stack gas exit velocity (ft/sec)</td> <td colspan="2">Stack gas exit velocity (ft/sec)</td> <td colspan="2">Date of construction / modification</td> </tr> <tr> <td colspan="2">Stack gas flow at process conditions, not at standard (ft³/min)</td> <td colspan="2">Stack gas exit velocity (ft/sec)</td> <td colspan="2">Operating rate (Max) or tank capacity</td> </tr> <tr> <td colspan="2">110840</td> <td colspan="2">45.67</td> <td colspan="2">365 MMBtu/hr</td> </tr> </tbody> </table>		Location of stack or vent		Horizontal Coordinate		Operating rate (Max) or tank capacity		UTM Zone No.		X	15	mE		UTM Zone No.		<input checked="" type="checkbox"/>	16	mN		Stack gas exit velocity (ft/sec)		Stack gas exit velocity (ft/sec)		Date of construction / modification		Stack gas flow at process conditions, not at standard (ft ³ /min)		Stack gas exit velocity (ft/sec)		Operating rate (Max) or tank capacity		110840		45.67		365 MMBtu/hr																					
Location of stack or vent		Horizontal Coordinate		Operating rate (Max) or tank capacity																																																							
UTM Zone No.		X	15	mE																																																							
UTM Zone No.		<input checked="" type="checkbox"/>	16	mN																																																							
Stack gas exit velocity (ft/sec)		Stack gas exit velocity (ft/sec)		Date of construction / modification																																																							
Stack gas flow at process conditions, not at standard (ft ³ /min)		Stack gas exit velocity (ft/sec)		Operating rate (Max) or tank capacity																																																							
110840		45.67		365 MMBtu/hr																																																							
<p>Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<table border="1"> <thead> <tr> <th colspan="2">Operating Characteristics</th> <th colspan="2">Percent of annual throughput of pollutants through the emission point</th> <th colspan="2">Normal operating time of this point</th> <th colspan="2">Normal Operating Rate</th> </tr> <tr> <th colspan="2"></th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> </tr> </thead> <tbody> <tr> <td colspan="2"></td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> </tr> <tr> <td colspan="2"></td> <td></td> <td></td> <td></td> <td></td> <td>52</td> <td>MMBtu/hr</td> </tr> </tbody> </table>		Operating Characteristics		Percent of annual throughput of pollutants through the emission point		Normal operating time of this point		Normal Operating Rate				Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk			25	25	25	25	24	7							52	MMBtu/hr																								
Operating Characteristics		Percent of annual throughput of pollutants through the emission point		Normal operating time of this point		Normal Operating Rate																																																					
		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk																																																				
		25	25	25	25	24	7																																																				
						52	MMBtu/hr																																																				
<p>Fuel</p> <table border="1"> <thead> <tr> <th>Type of Fuel</th> <th>Heat Input (MMBtu/hr)</th> </tr> </thead> <tbody> <tr> <td>* See Note Below</td> <td>0.00</td> </tr> </tbody> </table>		Type of Fuel	Heat Input (MMBtu/hr)	* See Note Below	0.00																																																						
Type of Fuel	Heat Input (MMBtu/hr)																																																										
* See Note Below	0.00																																																										
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>000</td> <td>0.00%</td> <td>10.40</td> <td>11.19</td> <td>45.56</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>"</td> <td>0.00%</td> <td>131.08</td> <td>135.61</td> <td>574.14</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>000</td> <td>0.00%</td> <td>4.21</td> <td>4.93</td> <td>18.45</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>000</td> <td>0.00%</td> <td>4.55</td> <td>5.33</td> <td>19.95</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.46</td> <td>0.54</td> <td>2.03</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5			NITROGEN OXIDES	"	0.00%	131.08	135.61	574.14	5			PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3			SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3			TOTAL VOC (INCL. LISTED)	000	0.00%	0.46	0.54	2.03	3			<p>This source was previously permitted in Part 70 Air Permit No. 2520-V0.</p> <p>* Fuel Type/Maximum Heat Input: (a) OL-5 Process Gas - 365 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr</p> <p>** One of three zones of burners is equipped with low NOx burners.</p>	
Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																			
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5																																																					
NITROGEN OXIDES	"	0.00%	131.08	135.61	574.14	5																																																					
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3																																																					
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3																																																					
TOTAL VOC (INCL. LISTED)	000	0.00%	0.46	0.54	2.03	3																																																					



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge, LA 70804
(225) 765-0102

Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE.	NORCO, LA		Date of Submittal JULY 1999			
Source ID Number 18-76	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-152 (OL-5)		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate mE mN			
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 150.00	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) (ft²)	Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft ³ /min) 110840	Stack gas exit velocity (ft/sec) 45.67	Date of construction / modification N/A	Operating rate (Max) or tank capacity 385 MMBtu/hr
Fuel	Type of fuel a • See Note Below	Type of heat input 0.00	Operating Characteristics		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	Normal operating time of this point hrs/day days/wk wks/yr 329.00	Normal Operating Rate MMBtu/hr 385
Air Pollutant Specific Information							
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add. Change, or Delete Code
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.56	5	
NITROGEN OXIDES	-	0.00%	131.08	135.61	574.14	5	
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3	
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3	
TOTAL VOC (INCL LISTED)	000	0.00%	0.46	0.54	2.03	3	

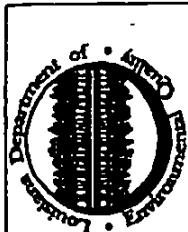
This source was previously permitted in Part 70 Air Permit No. 2520-V0.
 *Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr
 - One of three zones of burners is equipped with low NOx burners.

 <p>LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>		<p>Date of Submittal JULY 1999</p>									
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO, LA	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate mE mN 3321315 mN								
Source ID Number 19-76	Descriptive name of the equipment served by this stack or vent PYROLYSIS FURNACE, F-153 (OL-5)	Stack gas exit temperature (Deg F) 400	Stack gas flow at process conditions, not at standard (ft ³ /min) 110840								
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Diameter (ft) or stack discharge area (ft ²) 7.17 (ft) (ft ²)	Stack gas exit velocity (ft/sec) 45.67	Operating rate (Max) or tank capacity 385 MMBtu/hr								
Fuel	Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point		Normal Operating Rate					
	Type of fuel a * See Note Below	Heat Input (MMBTU/hr) 0.00		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	hrs/day	days/wk
		25	25	25	25	24	7	52	329.00		
Air Pollutant Specific Information											
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission Method (tons/yr)	Add, Change, or Delete Code	Concentration of Gases exiting at stack				
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.58	5					
NITROGEN OXIDES	-	0.00%	131.08	135.61	574.14	5					
PARTICULATE MATTER	000	0.00%	4.21	4.83	18.45	3					
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3					
TOTAL VOC (INCL. LISTED)	000	0.00%	0.46	0.54	2.03	3					

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Types/Maximum Heat Input: (a) OL-5 Process Gas - 385 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% Ol-5 Tail Gas - 385 MMBtu/hr

** One of three zones of burners is equipped with low NOx burners.



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge, LA 70804
(225) 765-0102

Company Name

SHELL CHEMICAL LP

Date of Submittal

JULY 1999

Plant location and name (if any)

NORCO, LA

Source ID Number

20-76 PYROLYSIS FURNACE, F-154 (OL-5)

Description of the equipment served by this stack or vent

NORCO CHEMICAL PLANT - EAST SITE

Fuel	Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point		Nominal Operating Rate	
	Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	wk/yr	
a	* See Note Below	0.00	25	25	25	25	24	52	329.00 MMBtu/hr

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases existing at stack
CARBON MONOXIDE	000	0.00%	10.40	11.19	45.58	5		
NITROGEN OXIDES	-	0.00%	131.08	135.61	674.14	5		
PARTICULATE MATTER	000	0.00%	4.21	4.93	18.45	3		
SULFUR DIOXIDE	000	0.00%	4.55	5.33	19.95	3		
TOTAL VOC (INCL. LISTED)	000	0.00%	0.46	0.54	2.03	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

* Fuel Type/Maximum Heat Input: (a) OL-5 Process Gas - 345 MMBtu/hr (b) OL-5 Tail Gas - 385 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 385 MMBtu/hr

** One of three zones of burners is equipped with low NOx burners.

Department of Environmental Quality		LOUISIANA									
Air Quality Division P.O. Box 44036 Baton Rouge, LA 70804 (225) 765-0102		SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants									
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate <input type="checkbox"/> N/A <input type="checkbox"/> N/A								
Source ID Number 6-84	Descriptive name of the equipment served by this stack or vent OL-5 ELEVATED FLARE (FE-101)	Stack gas exit temperature (Deg F) 11.88 (F) ($^{\circ}$ F)	Stack gas flow at process conditions, not at standard ($^{\circ}$ F/3'min) N/A								
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 300.00	Diameter (ft) or stack discharge area ($\pi \cdot r^2$) 11.88 (ft) ($\pi \cdot r^2$)	Stack gas exit velocity (ft/sec) 1832								
Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point				Normal operating time at this point		Normal Operating Rate	
Fuel	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	MMBTU/hr
a	N/A			25	25	25	25	24	7	52	25.48
Air Pollutant Specific Information											
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack			
CARBON MONOXIDE	• 0.00%	2.12	18.09	9.29	3						
NITROGEN OXIDES	• 0.00%	3.61	30.75	15.79	3						
PARTICULATE MATTER	• 0.00%	0.86	5.65	2.80	3						
SULFUR DIOXIDE	• 0.00%	0.002	0.002	0.01	3						
TOTAL VOC (INCL. LISTED)	• 99.00%	40.03	430.47	175.32	3						
1,3-BUTADIENE	• 99.00%	0.97	6.22	4.25	3						
BENZENE	• 99.00%	0.98	0.98	4.28	3						
ETHYLBENZENE	• 99.00%	0.01	0.01	0.04	3						
HEXANE (H)	• 99.00%	0.07	0.07	0.33	3						
NAPHTHALENE	• 99.00%	0.003	0.003	0.01	3						
STYRENE	• 99.00%	0.02	0.02	0.08	3						
TOLUENE	• 99.00%	0.38	0.38	1.68	3						
XYLFINE (MIXED ISOMERS)	• 99.00%	0.18	0.18	0.77	3						

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
Note: Diameter is equivalent diameter for air dispersion modelling purposes; source is a control device.



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102	NORCO, LA Date of Submittal JULY 1999																																																																																																																						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16 Vertical Coordinate N/A																																																																																																																				
Source ID Number 7-84	Descriptive name of the equipment served by this stack or vent OL-5 GROUND FLARE (FG-101)		Stack gas exit temperature (Deg F) 1186 (ft) (ft ²)	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) 65.62	Date of construction / modification N/A	Operating rate (Max) or tank capacity 452.228 MMBtu/hr																																																																																																																
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 67.00	Diameter (ft) or stack discharge area (ft ²) 11.86 (ft) (ft ²)	Operating Characteristics	Percent of annual throughput of pollutants through this emission point Dec-Feb 25	Normal operating time of this point hrs/day 25	Normal operating time of this point days/wk 24	Normal Operating Rate MMBtu/hr 25.48																																																																																																																
Fuel	Type of fuel N/A	Heat Input (MMBTU/hr)	Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25																																																																																																																	
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> </tr> </thead> <tbody> <tr> <td>CARBON MONOXIDE</td> <td>*</td> <td>0.00%</td> <td>2.12</td> <td>18.09</td> <td>8.28</td> <td>3</td> <td></td> </tr> <tr> <td>NITROGEN OXIDES</td> <td>*</td> <td>0.00%</td> <td>3.61</td> <td>30.75</td> <td>15.78</td> <td>3</td> <td></td> </tr> <tr> <td>PARTICULATE MATTER</td> <td>*</td> <td>0.00%</td> <td>0.66</td> <td>5.65</td> <td>2.90</td> <td>3</td> <td></td> </tr> <tr> <td>SULFUR DIOXIDE</td> <td>*</td> <td>0.00%</td> <td>0.002</td> <td>0.002</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>*</td> <td>98.00%</td> <td>40.03</td> <td>430.47</td> <td>175.32</td> <td>3</td> <td></td> </tr> <tr> <td>1,3-BUTADIENE</td> <td>*</td> <td>98.00%</td> <td>0.97</td> <td>6.22</td> <td>4.25</td> <td>3</td> <td></td> </tr> <tr> <td>BENZENE</td> <td>*</td> <td>98.00%</td> <td>0.88</td> <td>0.88</td> <td>4.28</td> <td>3</td> <td></td> </tr> <tr> <td>ETHYL BENZENE</td> <td>*</td> <td>98.00%</td> <td>0.01</td> <td>0.01</td> <td>0.04</td> <td>3</td> <td></td> </tr> <tr> <td>HEXANE (-N)</td> <td>*</td> <td>98.00%</td> <td>0.07</td> <td>0.07</td> <td>0.33</td> <td>3</td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>*</td> <td>98.00%</td> <td>0.003</td> <td>0.003</td> <td>0.01</td> <td>3</td> <td></td> </tr> <tr> <td>STYRENE</td> <td>*</td> <td>98.00%</td> <td>0.02</td> <td>0.02</td> <td>0.08</td> <td>3</td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>*</td> <td>98.00%</td> <td>0.38</td> <td>0.38</td> <td>1.68</td> <td>3</td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>*</td> <td>98.00%</td> <td>0.18</td> <td>0.18</td> <td>0.77</td> <td>3</td> <td></td> </tr> </tbody> </table>								Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	CARBON MONOXIDE	*	0.00%	2.12	18.09	8.28	3		NITROGEN OXIDES	*	0.00%	3.61	30.75	15.78	3		PARTICULATE MATTER	*	0.00%	0.66	5.65	2.90	3		SULFUR DIOXIDE	*	0.00%	0.002	0.002	0.01	3		TOTAL VOC (INCL. LISTED)	*	98.00%	40.03	430.47	175.32	3		1,3-BUTADIENE	*	98.00%	0.97	6.22	4.25	3		BENZENE	*	98.00%	0.88	0.88	4.28	3		ETHYL BENZENE	*	98.00%	0.01	0.01	0.04	3		HEXANE (-N)	*	98.00%	0.07	0.07	0.33	3		NAPHTHALENE	*	98.00%	0.003	0.003	0.01	3		STYRENE	*	98.00%	0.02	0.02	0.08	3		TOLUENE	*	98.00%	0.38	0.38	1.68	3		XYLENE (MIXED ISOMERS)	*	98.00%	0.18	0.18	0.77	3	
Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code																																																																																																																
CARBON MONOXIDE	*	0.00%	2.12	18.09	8.28	3																																																																																																																	
NITROGEN OXIDES	*	0.00%	3.61	30.75	15.78	3																																																																																																																	
PARTICULATE MATTER	*	0.00%	0.66	5.65	2.90	3																																																																																																																	
SULFUR DIOXIDE	*	0.00%	0.002	0.002	0.01	3																																																																																																																	
TOTAL VOC (INCL. LISTED)	*	98.00%	40.03	430.47	175.32	3																																																																																																																	
1,3-BUTADIENE	*	98.00%	0.97	6.22	4.25	3																																																																																																																	
BENZENE	*	98.00%	0.88	0.88	4.28	3																																																																																																																	
ETHYL BENZENE	*	98.00%	0.01	0.01	0.04	3																																																																																																																	
HEXANE (-N)	*	98.00%	0.07	0.07	0.33	3																																																																																																																	
NAPHTHALENE	*	98.00%	0.003	0.003	0.01	3																																																																																																																	
STYRENE	*	98.00%	0.02	0.02	0.08	3																																																																																																																	
TOLUENE	*	98.00%	0.38	0.38	1.68	3																																																																																																																	
XYLENE (MIXED ISOMERS)	*	98.00%	0.18	0.18	0.77	3																																																																																																																	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
Note: Diameter is equivalent diameter for air dispersion modelling purposes; source is a control device.
Physical stack parameters are 2.52 ft² stack discharge area and 38 ft/sec stack gas exit velocity.

Department of Environmental Quality		SINGAPORE	
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		SINGLE POINT/AREAVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999	
Source ID Number 1001-94	Descriptive name of the equipment served by this stack or vent TANK F-499 EXTERNAL FLOATING ROOF		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 232.00 (ft²)	Stack gas exit temperature (Deg F) N/A
			Stack gas flow at process conditions, not at standard (ft ³ /min) N/A
Fuel	Type of fuel <input type="checkbox"/> a <input checked="" type="checkbox"/> N/A	Heat Input (MMBTU/hr)	Operating Characteristics
			Dec-Feb Mar-May Jun-Aug Sep-Nov
			25 25 25 25
			hrs/day days/yr
			252.00 MMg/day
Air Pollutant Specific Information		Concentration of gases exiting at stack	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate
		Average (lbs/hr)	Maximum (lbs/hr)
TOTAL VOC (INCL. LISTED)	-	0.00%	20.16
BENZENE	-	0.00%	0.10
ETHYL BENZENE	-	0.00%	0.02
HEXANE (-N)	-	0.00%	0.04
HYDROGEN SULFIDE	-	0.00%	0.03
NAPHTHALENE	-	0.00%	0.002
PAH (not otherwise listed)	-	0.00%	<0.001
TOLUENE	-	0.00%	0.04
XYLOENE (MIXED ISOMERS)	-	0.00%	0.01

This source was previously permitted in Part 70 Air Permit No. 2520-VG. This source is part of the OL-5 Feed Tank Product Group (Source ID 50035-87). Maximum (lb/hr), Average (lb/hr), and Annual (tons/yr) emission rates are based on the maximum pumping capacity of each individual tank.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44098
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name **SHELL CHEMICAL LP**
 Plant location and name (if any) **NORCO CHEMICAL PLANT - EAST SITE NORCO, LA**

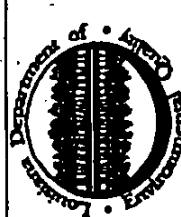
Date of Submittal **JULY 1999**

Source ID Number	Descriptive name of the equipment served by this stack or vent			Location of stack or vent			Horizontal Coordinate UTM Zone No. <input checked="" type="checkbox"/> 15 Vertical Coordinate <input type="checkbox"/> 16	Operating rate (Max) or tank capacity Stack gas exit velocity (ft/sec) <input type="checkbox"/> N/A	Date of construction / modification 1979
	Slack and Discharge Physical Characteristics	Height of stack above grade (ft)	Diameter (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)				
1012-95	TANK K-498 FIXED ROOF	16.00	N/A (ft ²)	N/A	N/A				
Fuel									
	Type of fuel	Heat Input (MMBTU/hr)	Operating Characteristics	Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal operating time of this point	Normal operating time of this point	Normal operating time of this point	Normal Operating Rate
	B	N/A	Dec-Feb Mar-May Jun-Aug Sep-Nov	25	25	25	24	7	3,571.00 bbl/yr

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code
TOTAL VOC (INCL. LISTED)	000	0.00%	Average (lbs/hr) <0.001 Maximum (lbs/hr) <0.001 Annual (ton/yr) <0.01	3	

This source was previously permitted in Part 70 Air Permit No. 2520-V0.



Date of Submittal
JULY 1999

Department of Environmental Quality		SINGLE POINT/AREA/VOLUME SOURCE					
Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ)					
Company Name SHELL CHEMICAL LP		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA					
Source ID Number 1032-95	Descriptive name of the equipment served by this stack or vent TANK B-482 FIXED ROOF		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate mE 3321659	Vertical Coordinate mN 751079	Operating rate (Max) or tank capacity 433137 gal	
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 32.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A (ft) (ft ²)	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification N/A	Normal operating time of this point hrs/day wk/day yr
						1979	11,905.00 bbl/yr
Fuel	Type of fuel a. N/A	Type of fuel used and heat input Heat Input (MMBTU/hr)		Operating Characteristics		Normal operating time of this point hrs/day wk/day yr	Normal Operating Rate
	Dec-Feb 25	Mar-May 25	Jun-Aug 25	Sep-Nov 25	hrs/day 24		
Air Pollutant Specific Information							
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission Estimation Method (tons/yr)	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)	000	0.00%	0.001	0.14	<0.01	3	
NAPHTHALENE	000	0.00%	<0.001	0.01	<0.01	3	
XYLENE (MIXED ISOMERS)	000	0.00%	<0.001	<0.001	<0.01	3	

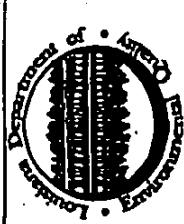
This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 44088 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																													
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Date of Submittal JULY 1999																													
Source ID Number 1033-95	Descriptive name of the equipment served by this stack or vent TANK B-483 FIXED ROOF	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 Horizontal Coordinate <input type="checkbox"/> 16 Vertical Coordinate Slack gas flow at process conditions, not at standard (F=3/min) N/A Slack gas exit velocity (f/sec) N/A Date of construction / modification N/A 1978 N/A Operating rate (Max) or tank capacity 230292 gal																													
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft) 32.00	Stack gas exit temperature (Deg F) N/A (ft) (ft ²)																													
Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point		Normal operating time of this point	Normal Operating Rate																								
	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May			Jun-Aug	Sep-Nov																						
a	N/A	25	25	25	25	hrs/day	142,857.00 bb/yr																								
						days/wk																									
						wk/yr																									
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Emission Rate</th> <th>Annual Estimation Method</th> <th>Add, Change, or Delete Code</th> <th colspan="2">Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td>Average (lbs/hr) 0.01</td> <td>Maximum (lbs/hr) 0.13</td> <td>Annual (ton/yr) 0.03</td> <td>3</td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>000</td> <td>0.00%</td> <td>0.002</td> <td>0.40</td> <td>0.01</td> <td>3</td> <td></td> </tr> </tbody> </table>								Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack		TOTAL VOC (INCL. LISTED)	000	0.00%	Average (lbs/hr) 0.01	Maximum (lbs/hr) 0.13	Annual (ton/yr) 0.03	3		NAPHTHALENE	000	0.00%	0.002	0.40	0.01	3	
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Annual Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																									
TOTAL VOC (INCL. LISTED)	000	0.00%	Average (lbs/hr) 0.01	Maximum (lbs/hr) 0.13	Annual (ton/yr) 0.03	3																									
NAPHTHALENE	000	0.00%	0.002	0.40	0.01	3																									

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

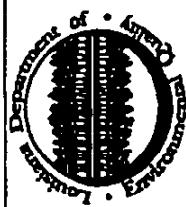
Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		SINGLE POINT/AREAVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants LOUISIANA	
		Date of Submittal JULY 1999	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate N/A N/A
Source ID Number 1039-95	Descriptive name of the equipment served by this stack or vent TANK K-501 FIXED ROOF		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 17.67	Diameter (ft) or stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A
		Operating Characteristics	
Fuel	Type of fuel <input type="checkbox"/> N/A	Heat Input (MMBTU/hr) <input type="checkbox"/>	Type of fuel used and heat input Operating Characteristics
		Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	
		Normal operating time of this point hrs/day days/wk yrs/yr 24 7 52 762.00 bbl/yr	
		Normal Operating Rate Operating rate (Max) or tank capacity 2595 gal	
		Add, Change, or Delete Code	
		Concentration of gases exiting at stack	
Air Pollutant Specific Information		Emission Rate Average (lb/hr)	Emission Estimation Method
Pollutant	Control Equipment Code	Maximum (lb/hr)	Annual (ton/yr)
TOTAL VOC (INCL. LISTED)	000 0.00%	<0.001	0.11 <0.01 3
HYDRAZINE	000 0.00%	<0.001	0.11 <0.01 3

This application was previously submitted in Part 70 Air Permit No. 25520-YO.



Department of Environmental Quality		SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants						
Company Name	Plant location and name (if any)	NORCO CHEMICAL PLANT - EAST SITE			NORCO, LA			
Source ID Number	Descriptive name of the equipment served by this stack or vent	Location of stack or vent UTM Zone No.		Horizontal Coordinate Vertical Coordinate		Date of Submittal		
1055-95	TANK B-484 INTERNAL FLOATING ROOF	<input checked="" type="checkbox"/> 15	<input type="checkbox"/> 16	<input type="checkbox"/> N/A	<input type="checkbox"/> N/A	JULY 1999	mE	
Stack and Discharge Physical Characteristics	Height of stack above grade (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)	Stack gas exit velocity (ft/sec)	Date of construction / modification	Operating rate (Max) or tank capacity		
Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	N/A (ft) (ft ²)	N/A	N/A	N/A	1979	300789 gal		
Fuel	Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point days/wk weeks/yr	Normal Operating Rate bbl/yr
	Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov		
a	N/A	25	25	25	25	7	52	
Air Pollutant Specific Information								
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission Rate (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL. LISTED)	-	0.00%	2.61	2.61	11.43	3		
BENZENE	-	0.00%	0.01	0.01	0.02	3		
ETHYL BENZENE	-	0.00%	0.003	0.003	0.01	3		
HEXANE (-N)	-	0.00%	0.08	0.08	0.28	3		
HYDROGEN SULFIDE	-	0.00%	0.01	0.01	0.03	3		
NAPHTHALENE	-	0.00%	<0.001	<0.001	<0.01	3		
PAH (not otherwise listed)	-	0.00%	<0.001	<0.001	<0.01	3		
TOLUENE	-	0.00%	0.01	0.01	0.03	3		
XYLENE (MIXED ISOMERS)	-	0.00%	0.002	0.002	0.01	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
• Internal Floating Roof Tank



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Department of Environmental Quality
Air Quality Division
P.O. Box 440985
Baton Rouge, LA 70804
(225) 765-0102

Company Name

SHELL CHEMICAL LP

Source ID Number
1060-95

Descriptive name of the equipment served by this stack or vent
TANK K-500 FIXED ROOF

Date of Submittal
JULY 1999

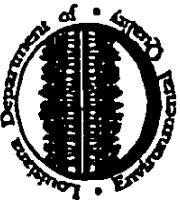
Plant location and name (if any)	NORCO CHEMICAL PLANT - EAST SITE NORCO, LA				
Company Name					

Fuel	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point			Normal operating time of this point	Normal Operating Rate
	Type of fuel	Heat Input (MMBTU/hr)		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	
a	N/A			25	25	25	25	138.00 bbl/yr
b								
c								
d								
e								
f								
g								
h								
i								
j								
k								
l								
m								
n								
o								
p								
q								
r								
s								
t								
u								
v								
w								
x								
y								
z								

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)	000	0.00%	0.01	12.60	0.04	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

<p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 785-0102</p>		 <p>LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																										
<p>Company Name SHELL CHEMICAL LP</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																										
<p>Source ID Number 1061-95</p>		<p>Descriptive name of the equipment served by this stack or vent TANK F-431 FIXED ROOF</p>																										
<p>Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Height of stack above grade (ft) 29.08</p>	<p>Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)</p>																									
		<p>Stack gas exit temperature (Deg F) N/A</p>	<p>Stack gas flow at process conditions, not at standard (ft³/min) N/A</p>																									
		<p>Operating Characteristics</p> <table border="1"> <thead> <tr> <th>Fuel</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Fuel	Type of fuel	Heat Input (MMBTU/hr)	Type of fuel	Heat Input (MMBTU/hr)	a	N/A																			<p>Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25</p>
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Type of fuel	Heat Input (MMBTU/hr)																								
a	N/A																											
			<p>Normal operating time of this point hrs/day days/wk wks/yr 1628 7 52</p>																									
			<p>Normal Operating Rate bbl/yr 2,857,143.00</p>																									
<p>Air Pollutant Specific Information</p>		<p>Control Equipment Code</p>																										
<p>Pollutant</p>		<p>Control Equipment Efficiency (%)</p>	<p>Emission Rate</p>																									
<p>TOTAL VOC (INCL. LISTED)</p>		<p>0.00%</p>	<p>Average (lbs/hr)</p>																									
<p>BENZENE</p>		<p>0.00%</p>	<p>Maximum (lbs/hr)</p>																									
<p>NAPHTHALENE</p>		<p>0.00%</p>	<p>Annual (ton/yr)</p>																									
			<p>Emission Estimation Method</p>																									
			<p>Add, Change, or Delete Code</p>																									
			<p>Concentration of gases exiting at stack</p>																									

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

	
Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	
Date of Submittal JULY 1999	

Company Name SHELL CHEMICAL LP		Descriptive name of the equipment served by this stack or vent TANK F-434 FIXED ROOF		Location of stack or vent <input checked="" type="checkbox"/> UTM Zone No. <input type="checkbox"/> 15 <input type="checkbox"/> N/A <input type="checkbox"/> 16		Horizontal Coordinate 750100 mE Vertical Coordinate 3321250 mN																
Source ID Number 1062-95		Height of stack above grade (ft) 29.00	Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft³/min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification 1929	Operating rate (Max) or tank capacity 3244507 gal														
Fuel <input checked="" type="checkbox"/> a		Type of fuel used and heat input Heat Input (MMBTU/hr) N/A		Operating Characteristics		Percent of annual throughput of pollutants through this emission point <table border="1"> <tr> <td>Dec-Feb</td> <td>Mar-May</td> <td>Jun-Aug</td> <td>Sep-Nov</td> </tr> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> </tr> </table>	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	25	25	25	25	Normal operating time of this point <table border="1"> <tr> <td>hrs/day</td> <td>days/wk</td> <td>wks/yr</td> </tr> <tr> <td>24</td> <td>7</td> <td>52</td> </tr> </table>	hrs/day	days/wk	wks/yr	24	7	52	Nominal Operating Rate 2,857,143.00 bbl/yr
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov																			
25	25	25	25																			
hrs/day	days/wk	wks/yr																				
24	7	52																				
Air Pollutant Specific Information		Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emissions Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack														
					<table border="1"> <tr> <td> Average (lbs/hr) 0.00 </td> <td> Maximum (lbs/hr) 2.04 </td> <td> Annual (ton/yr) 2.46 </td> </tr> </table>	Average (lbs/hr) 0.00	Maximum (lbs/hr) 2.04	Annual (ton/yr) 2.46	<table border="1"> <tr> <td> 8.85 </td> <td> 3 </td> </tr> </table>	8.85	3											
Average (lbs/hr) 0.00	Maximum (lbs/hr) 2.04	Annual (ton/yr) 2.46																				
8.85	3																					
		TOTAL VOC (INCL LISTED)	000	0.00%	<table border="1"> <tr> <td> 0.04 </td> <td> 0.01 </td> </tr> </table>	0.04	0.01	<table border="1"> <tr> <td> 0.03 </td> <td> 3 </td> </tr> </table>	0.03	3												
0.04	0.01																					
0.03	3																					
		BENZENE	000	0.00%	<table border="1"> <tr> <td> 0.01 </td> <td> 0.05 </td> </tr> </table>	0.01	0.05	<table border="1"> <tr> <td> 0.03 </td> <td> 0.07 </td> </tr> </table>	0.03	0.07												
0.01	0.05																					
0.03	0.07																					
		NAPHTHALENE	000	0.00%	<table border="1"> <tr> <td> 0.05 </td> <td> 0.05 </td> </tr> </table>	0.05	0.05	<table border="1"> <tr> <td> 0.22 </td> <td> 3 </td> </tr> </table>	0.22	3												
0.05	0.05																					
0.22	3																					

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submission JULY 1999																																	
Source ID Number 1063-95	Descriptive name of the equipment served by this stack or vent TANK F-435 FIXED ROOF	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16	Horizontal Coordinate Vertical Coordinate N/A																																
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 29.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²) N/A	Stack gas exit temperature (Deg F) N/A																																
		Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A																																
			Date of construction / modification 1929																																
Fuel	Type of fuel used and heat input Type of fuel a N/A	Operating Characteristics Heat Input (MMBTU/hr)	Normal operating time of this point Normal operating time of this point hrs/day days/wk wks/yr 2,857,143.00 bbl/yr																																
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Emission Rate Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (tons/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>2.04</td> <td>2.46</td> <td>8.83</td> <td>3</td> <td></td> </tr> <tr> <td>BENZENE</td> <td>000</td> <td>0.00%</td> <td>0.01</td> <td>0.01</td> <td>0.03</td> <td>3</td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>000</td> <td>0.00%</td> <td>0.05</td> <td>0.07</td> <td>0.22</td> <td>3</td> <td></td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Emission Rate Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	000	0.00%	2.04	2.46	8.83	3		BENZENE	000	0.00%	0.01	0.01	0.03	3		NAPHTHALENE	000	0.00%	0.05	0.07	0.22	3	
Pollutant	Control Equipment Code	Emission Rate Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																												
TOTAL VOC (INCL LISTED)	000	0.00%	2.04	2.46	8.83	3																													
BENZENE	000	0.00%	0.01	0.01	0.03	3																													
NAPHTHALENE	000	0.00%	0.05	0.07	0.22	3																													

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality		At Quality Division P.O. Box 44098 Baton Rouge, LA 70804 (225) 765-0102		Louisiana SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants		Date of Submittal JULY 1999	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Location of stack or vent UTM Zone No. X 15		Horizontal Coordinate Vertical Coordinate 16		Operating rate (Max) or tank capacity 748894 mE 3321208 mN	
Source ID Number 1064-95	Descriptive name of the equipment served by this stack or vent TANK H-432 FIXED ROOF		Stack gas exit temperature (Deg F) N/A (ft ²) 250	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification 1959	Normal operating time of this point
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 32.08	Diameter (ft) or stack discharge area (ft ²) N/A (ft ²) N/A	Percent of annual throughput of pollutants through this emission point		Normal Operating Rate		
			Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	Normal Operating Rate 1526593 gal bbl/yr
Type of fuel used and heat input		Operating Characteristics		25	25	25	Normal Operating Rate 733,333.00 bbl/yr
Fuel a	Type of fuel N/A	Heat Input (MMBTU/hr)	25	25	25	24	Normal Operating Rate 733,333.00 bbl/yr
Air Pollutant Specific Information							
Air Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code
TOTAL VOC (INCL. LISTED)	000	0.00%	0.05	0.11	0.24	3	
NAPHTHALENE	000	0.00%	0.04	0.08	0.18	3	
PAH (not otherwise listed)	000	0.00%	<0.001	<0.001	<0.01	3	
Concentration of gases exiting at stack							

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44098
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA
SINGLE POINT/AERAVOLUME SOURCE
 Emission Inventory Questionnaire (EIQ)
 for Air Pollutants

		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA		Date of Submittal JULY 1999																	
Company Name SHELL CHEMICAL LP		Descriptive name of the equipment served by this stack or vent TANK H-433 FIXED ROOF		Location of stack or vent <input checked="" type="checkbox"/> UTM Zone No. 15																	
Source ID Number 1065-95		Height of stack above grade (ft) 32.08	Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)	Stack gas exit temperature (Deg F) 250	Stack gas flow at process conditions, not at standard (ft³/min) N/A																
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				Stack gas exit velocity (ft/sec) N/A	Operating rate (Max) or tank capacity 1526556 gal																
Fuel		Type of fuel used and heat input <table border="1"> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> <tr> <td>a</td> <td>N/A</td> </tr> </table>		Type of fuel	Heat Input (MMBTU/hr)	a	N/A	Operating Characteristics <table border="1"> <tr> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> </tr> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> </tr> <tr> <td>hrs/day</td> <td>days/wk</td> <td>wks/yr</td> <td>bbls/yr</td> </tr> </table>		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	25	25	25	25	hrs/day	days/wk	wks/yr	bbls/yr
Type of fuel	Heat Input (MMBTU/hr)																				
a	N/A																				
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov																		
25	25	25	25																		
hrs/day	days/wk	wks/yr	bbls/yr																		
Air Pollutant Specific Information		Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lbs/hr) Maximum (lbs/hr) Annual (tons/yr)	Add, Change, or Delete Code																
		000	0.00%	0.05 0.11 0.24	3																
TOTAL VOC (INCL LISTED)		000	0.00%	0.04 0.08 0.18	3																
NAPHTHALENE		000	0.00%	<0.001 <0.01	3																
PAH (not otherwise listed)		000	0.00%	<0.001 <0.01	3																

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44098
 Baton Rouge, LA 70804
 (225) 765-0102



LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name

SHELL CHEMICAL LP

Date of Submittal

JULY 1999

Source ID Number	Descriptive name of the equipment served by this stack or vent!	
1066-95	NORCO CHEMICAL PLANT - EAST SITE	

Plant location and name (if any)

NORCO, LA

Location of stack or vent

JULY 1999

Fuel	Type of fuel	Heat Input (MMBTU/hr)	Operating Characteristics		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate
			Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	
a	N/A		25	25	25	hrs/day	days/yr
						7	52
							733,333.00 bbl/yr

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Central Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL. LISTED)	000	0.00%	0.05	0.10	0.22	3		
NAPHTHALENE	000	0.00%	0.04	0.07	0.16	3		
PAH (not otherwise listed)	000	0.00%	<0.001	<0.001	<0.01	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

 <p>LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																				
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA																																																			
Source ID Number 1078-95	Date of Submittal JULY 1999																																																			
<table border="1"> <thead> <tr> <th colspan="2">Descriptive name of the equipment served by this stack or vent</th> <th colspan="2">Location of stack or vent</th> <th colspan="2">Horizontal Coordinate</th> <th colspan="2">Vertical Coordinate</th> </tr> <tr> <th colspan="2"></th> <th colspan="2">UTM Zone No.</th> <th>15</th> <th>16</th> <th>mE</th> <th>mN</th> </tr> </thead> <tbody> <tr> <td colspan="2">TANK M-421 FIXED ROOF</td> <td colspan="2"></td> <td></td> <td></td> <td>3320738</td> <td>3320738</td> </tr> <tr> <td>Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</td> <td>Height of stack above grade (ft) 16.00</td> <td>Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²) N/A</td> <td>Stack gas exit temperature (Deg F) N/A (ft) (ft²) N/A</td> <td>Stack gas flow at process conditions, not at standard (ft³/min) N/A</td> <td>Stack gas exit velocity (ft/sec) N/A</td> <td>Date of construction / modification N/A</td> <td>Operating rate (Max) or tank capacity 21149 gal</td> </tr> </tbody> </table>		Descriptive name of the equipment served by this stack or vent		Location of stack or vent		Horizontal Coordinate		Vertical Coordinate				UTM Zone No.		15	16	mE	mN	TANK M-421 FIXED ROOF						3320738	3320738	Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft) 16.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²) N/A	Stack gas exit temperature (Deg F) N/A (ft) (ft ²) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification N/A	Operating rate (Max) or tank capacity 21149 gal																			
Descriptive name of the equipment served by this stack or vent		Location of stack or vent		Horizontal Coordinate		Vertical Coordinate																																														
		UTM Zone No.		15	16	mE	mN																																													
TANK M-421 FIXED ROOF						3320738	3320738																																													
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft) 16.00	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²) N/A	Stack gas exit temperature (Deg F) N/A (ft) (ft ²) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A	Date of construction / modification N/A	Operating rate (Max) or tank capacity 21149 gal																																													
<table border="1"> <thead> <tr> <th rowspan="2">Fuel</th> <th colspan="2">Type of fuel used and heat input</th> <th colspan="2">Operating Characteristics</th> <th colspan="2">Percent of annual throughput of pollutants through this emission point</th> <th colspan="2">Normal operating time of this point</th> <th colspan="2">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> <th>bb/yr</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> <td>1,810.00</td> </tr> <tr> <td></td> </tr> <tr> <td></td> </tr> </tbody> </table>		Fuel	Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate		Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	bb/yr	a	N/A	25	25	25	25	24	7	52	1,810.00																				
Fuel	Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point		Normal Operating Rate																																											
	Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	bb/yr																																										
a	N/A	25	25	25	25	24	7	52	1,810.00																																											
<table border="1"> <thead> <tr> <th colspan="2">Air Pollutant Specific Information</th> <th colspan="2">Control Equipment</th> <th colspan="2">Emission Rate</th> <th colspan="2">Add, Change, or Delete Code</th> <th colspan="2">Concentration of gases exiting at stack</th> </tr> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Equipment Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Method</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Air Pollutant Specific Information		Control Equipment		Emission Rate		Add, Change, or Delete Code		Concentration of gases exiting at stack		Pollutant	Control Equipment Code	Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Method				TOTAL VOC (INCL. LISTED)	000	0.00%	<0.001	<0.001	<0.01	3																								
Air Pollutant Specific Information		Control Equipment		Emission Rate		Add, Change, or Delete Code		Concentration of gases exiting at stack																																												
Pollutant	Control Equipment Code	Equipment Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Method																																														
TOTAL VOC (INCL. LISTED)	000	0.00%	<0.001	<0.001	<0.01	3																																														

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44096
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

 <p>Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>Plant location and name (if any)</p> <p>NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>		<p>Date of Submittal JULY 1999</p>																																																																
<p>Company Name SHELL CHEMICAL LP</p>		<p>Location of stack or vent</p> <p>UTM Zone No. <input checked="" type="checkbox"/> 15 Horizontal Coordinate <input type="checkbox"/> 16 Vertical Coordinate</p>		<p>Operating rate (Max) or tank capacity 751070 mE 3321639 mN 881122 gal</p>																																																																
<p>Source ID Number 1084-95</p> <p>Descriptive name of the equipment served by this stack or vent</p> <p>TANK K-609 FIXED ROOF</p>		<p>Stack gas exit temperature (Deg F) N/A (F) (R²)</p>		<p>Stack gas exit velocity (ft/sec) N/A</p>																																																																
<p>Stack and Discharge Physical Characteristics</p> <p>Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)</p>		<p>Percent of annual throughput of pollutants through this emission point</p> <table border="1"> <tr> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>hrs/yr</th> <th>days/yr</th> </tr> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> <td>52</td> </tr> </table>		Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	hrs/yr	days/yr	25	25	25	25	24	7	52	52																																															
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	hrs/yr	days/yr																																																													
25	25	25	25	24	7	52	52																																																													
<p>Fuel</p> <table border="1"> <tr> <td>Type of fuel</td> <td>Heat Input (MMBTU/hr)</td> </tr> <tr> <td>a</td> <td>N/A</td> </tr> </table>		Type of fuel	Heat Input (MMBTU/hr)	a	N/A	<p>Operating Characteristics</p> <table border="1"> <tr> <td>Type of fuel</td> <td>Heat Input (MMBTU/hr)</td> </tr> <tr> <td>b</td> <td>N/A</td> </tr> </table>		Type of fuel	Heat Input (MMBTU/hr)	b	N/A	<p>Normal Operating Rate</p>																																																								
Type of fuel	Heat Input (MMBTU/hr)																																																																			
a	N/A																																																																			
Type of fuel	Heat Input (MMBTU/hr)																																																																			
b	N/A																																																																			
<p>Air Pollutant Specific Information</p>		<p>Emission Rate</p> <table border="1"> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Average (lbs/hr)</th> <th>Maximum (lbs/hr)</th> <th>Annual (tons/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.32</td> <td>3.27</td> <td>1.42</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>ETHYL BENZENE</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td>0.002</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>000</td> <td>0.00%</td> <td>0.004</td> <td>0.04</td> <td>0.02</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>000</td> <td>0.00%</td> <td>0.002</td> <td>0.02</td> <td>0.01</td> <td>3</td> <td></td> <td></td> </tr> </table>		Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	000	0.00%	0.32	3.27	1.42	3			BENZENE	000	0.00%	<0.001	0.001	<0.01	3			ETHYL BENZENE	000	0.00%	<0.001	0.002	<0.01	3			NAPHTHALENE	000	0.00%	<0.001	<0.001	<0.01	3			TOLUENE	000	0.00%	0.004	0.04	0.02	3			XYLENE (MIXED ISOMERS)	000	0.00%	0.002	0.02	0.01	3				
Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lbs/hr)	Maximum (lbs/hr)	Annual (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																												
TOTAL VOC (INCL LISTED)	000	0.00%	0.32	3.27	1.42	3																																																														
BENZENE	000	0.00%	<0.001	0.001	<0.01	3																																																														
ETHYL BENZENE	000	0.00%	<0.001	0.002	<0.01	3																																																														
NAPHTHALENE	000	0.00%	<0.001	<0.001	<0.01	3																																																														
TOLUENE	000	0.00%	0.004	0.04	0.02	3																																																														
XYLENE (MIXED ISOMERS)	000	0.00%	0.002	0.02	0.01	3																																																														

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 440985
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA

SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants

Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Date of Submittal JULY 1999
--	---	---------------------------------------

Source ID Number 1085-95	Descriptive name of the equipment served by this stack or vent		Location of stack or vent		Horizontal Coordinate X 15 Vertical Coordinate Y 16	Operating rate (Max) or tank capacity 88122 gal	
	Stack and Discharge Physical Characteristics <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Height of stack above grade (ft) 24.00	Diameter (ft) of stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A (ft)			Stack gas flow at process conditions, not at standard (ft ³ /min) N/A
Fuel <input checked="" type="checkbox"/> A	Type of fuel used and heat input		Operating Characteristics		Percent of annual throughput of pollutants through this emission point Dec-Feb 25 Mar-May 25 Jun-Aug 25 Sep-Nov 25	Normal operating time of this point hrs/day 7 days/wk 52 wks/yr 16,819.00 bbl/yr	Normal Operating Rate
	Type of fuel N/A	Heat Input (MBTU/hr)	Central Equipment Efficiency (%)	Average (lb/sec)			

Air Pollutant Specific Information

Pollutant	Control Equipment Code	Central Equipment Efficiency (%)	Average (lb/sec)	Maximum (lb/sec)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL LISTED)	000	0.00%	0.32	3.27	1.42	3		
BENZENE	000	0.00%	<0.01	0.001	<0.01	3		
ETHYLBENZENE	000	0.00%	<0.01	0.002	<0.01	3		
NAPHTHALENE	000	0.00%	<0.01	<0.01	<0.01	3		
TOLUENE	000	0.00%	0.004	0.04	0.02	3		
XYLENE (MIXED ISOMERS)	000	0.00%	0.002	0.02	0.01	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

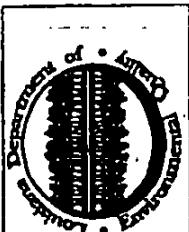


Department of Environmental Quality Air Quality Division P.O.Box 44096 Baton Rouge, LA 70804 (225) 765-0102		LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																							
 Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE - NORCO, LA		Date of Submittal JULY 1999																																																							
Company Name SHELL CHEMICAL LP		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 Horizontal Coordinate 751046 mE <input type="checkbox"/> 16 Vertical Coordinate 3321438 mN																																																							
Source ID Number 1093-95		Descriptive name of the equipment served by this stack or vent TANK W-433 FIXED ROOF																																																							
Stack and Discharge Physical Characteristics Change <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Height of stack above grade (ft) 29.00 Diameter (ft) or stack discharge area (ft ²) N/A (ft ²)	Stack gas exit temperature (Deg F) N/A Stack gas flow at process conditions, not at standard (ft ³ /min) N/A Stack gas exit velocity (ft/sec) N/A																																																						
		Operating Characteristics <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Fuel</th> <th colspan="2">Type of fuel used and heat input</th> <th rowspan="2">Percent of annual throughput of pollutants through this emission point</th> <th rowspan="2">Normal operating time of this point</th> <th rowspan="2">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td></td> <td>25</td> <td>25</td> <td>25</td> </tr> <tr> <td></td> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> </tr> <tr> <td></td> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> </tr> <tr> <td></td> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> </tr> </tbody> </table>		Fuel	Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate	Type of fuel	Heat Input (MMBTU/hr)	a	N/A		25	25	25				25	25	25				25	25	25				25	25	25																						
Fuel	Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point	Normal Operating Rate																																																			
	Type of fuel	Heat Input (MMBTU/hr)																																																							
a	N/A		25	25	25																																																				
			25	25	25																																																				
			25	25	25																																																				
			25	25	25																																																				
		Emission Rate <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Pollutant</th> <th rowspan="2">Control Equipment Code</th> <th rowspan="2">Control Efficiency (%)</th> <th rowspan="2">Average (lb/ft³)</th> <th rowspan="2">Maximum (lb/ft³)</th> <th rowspan="2">Annual (ton/yr)</th> <th rowspan="2">Emission Estimation Method</th> <th rowspan="2">Add, Change, or Delete Code</th> <th colspan="2">Concentration of gases exiting at stack</th> </tr> <tr> <th>Total VOC (incl. listed)</th> <th>Ammonia</th> <th>Benzene</th> <th>Phenol</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>000</td> <td>0.00%</td> <td>0.69</td> <td>82.54</td> <td>3.00</td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>AMMONIA</td> <td>000</td> <td>0.00%</td> <td>0.004</td> <td>0.49</td> <td>0.02</td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td>0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>PHENOL</td> <td>000</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lb/ft³)	Maximum (lb/ft³)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack		Total VOC (incl. listed)	Ammonia	Benzene	Phenol	TOTAL VOC (INCL. LISTED)	000	0.00%	0.69	82.54	3.00	3				AMMONIA	000	0.00%	0.004	0.49	0.02	3				BENZENE	000	0.00%	<0.001	0.001	<0.01	3				PHENOL	000	0.00%	<0.001	<0.001	<0.01	3			
Pollutant	Control Equipment Code	Control Efficiency (%)	Average (lb/ft³)									Maximum (lb/ft³)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																									
				Total VOC (incl. listed)	Ammonia	Benzene	Phenol																																																		
TOTAL VOC (INCL. LISTED)	000	0.00%	0.69	82.54	3.00	3																																																			
AMMONIA	000	0.00%	0.004	0.49	0.02	3																																																			
BENZENE	000	0.00%	<0.001	0.001	<0.01	3																																																			
PHENOL	000	0.00%	<0.001	<0.001	<0.01	3																																																			

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

 <p>LOUISIANA SINGLE POINT/AEROVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>		<p>Date of Submittal JULY 1999</p>																												
<p>Company Name SHELL CHEMICAL LP</p>		<p>Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																												
<p>Source ID Number 1211-95</p>		<p>Descriptive name of the equipment served by this stack or vent TANK F-498 EXTERNAL FLOATING ROOF</p>																												
<p>Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Height of stack above grade (ft) 40.00</p>	<p>Diameter (ft) or stack discharge area (ft²) 232.00 (ft) (ft²)</p>																											
		<p>Stack gas exit temperature (Deg F) N/A</p>	<p>Stack gas flow at process conditions, not at standard (ft³/min) N/A</p>																											
		<p>Operating Characteristics</p> <table border="1"> <thead> <tr> <th rowspan="2">Fuel</th> <th colspan="2">Type of fuel used and heat input</th> <th rowspan="2">Percent of annual throughput of pollutants through this emission point</th> <th rowspan="2">Normal operating time of this point</th> <th colspan="2">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBtu/hr)</th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>252.00</td> </tr> <tr> <td></td> <td></td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>MMgal/yr</td> </tr> </tbody> </table>		Fuel	Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point	Normal operating time of this point	Normal Operating Rate		Type of fuel	Heat Input (MMBtu/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	a	N/A	25	25	25	25	252.00			25	25	25	25	MMgal/yr
Fuel	Type of fuel used and heat input		Percent of annual throughput of pollutants through this emission point		Normal operating time of this point	Normal Operating Rate																								
	Type of fuel	Heat Input (MMBtu/hr)		Dec-Feb		Mar-May	Jun-Aug	Sep-Nov																						
a	N/A	25	25	25	25	252.00																								
		25	25	25	25	MMgal/yr																								
				<p>Date of construction / modification 1979</p>	<p>Operating rate (Max) or tank capacity 751116 mE 3323348 mN</p>																									
				<p>Slack gas exit velocity (ft/sec) N/A</p>	<p>13744884 gal</p>																									
				<p>Vertical Coordinate 16</p>	<p>Horizontal Coordinate 15</p>																									
				<p>UTM Zone No. <input checked="" type="checkbox"/></p>	<p>UTM Zone No. X</p>																									
				<p>Location of stack or vent!</p>	<p>Location of stack or vent!</p>																									

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
This source is part of the OL-5 Feed Tank Product Group (Source ID 5005-97). Average (lb/hr), Maximum (lb/hr) and Annual (tons/yr) emission rates are based on the maximum pumping capacity of each individual tank.



Department of Environmental Quality
Air Quality Division
P.O.Box 44096
Baton Rouge, LA 70804
(225) 765-0102

Company Name
SHELL CHEMICAL LP

LOUISIANA
SINGLE POINT/AREA/VOLUME SOURCE
Emission Inventory Questionnaire (EIQ)
for Air Pollutants

Date of Submission
JULY 1999

Plant location and name (if any)

NORCO CHEMICAL PLANT - EAST SITE

NORCO, LA

Source ID Number
1212-95

Descriptive name of the equipment served by this stack or vent
TANK F-500 EXTERNAL FLOATING ROOF

Location of stack or vent
UTM Zone No.
 15
 16

Horizontal Coordinate
Vertical Coordinate
mE
mN

Operating rate (Max)
or tank capacity
33233232
gal

Stack gas exit
velocity (ft/sec)
13744884
gal

Stack gas flow at process
conditions, not at standard
(ft³/min)
N/A

Stack gas exit
temperature (Deg F)
N/A

Height of stack
above grade (ft)
232.00
(ft²)

Diameter (ft) or stack
discharge area (ft²)
40.00

Percent of annual throughput of
pollutants through this emission point
Dec-Feb Mar-May Jun-Aug Sep-Nov
25 25 25 25

Normal operating time of
this point
hrs/day days/yr
197.8 197.8

Date of construction /
modification
197.8

Normal operating Rate
MMg/yr
252.00

Normal
Operating Rate
MMg/yr

Type of fuel used and heat input

Type of fuel
N/A

Heat Input (MMBTU/hr)

Operating
Characteristics

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

25

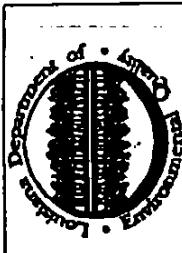
25

25

Department of Environmental Quality		SINGAPORE ENVIRONMENTAGENCY Environmental Protection Agency																																																																							
Air Quality Division P. O. Box 440986 Baton Rouge, LA 70804 (225) 765-0102		Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																																							
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE	Location of stack or vent Util Zone No. <input checked="" type="checkbox"/> 15	Horizontal Coordinate Vertical Coordinate																																																																						
Source ID Number 1250-95	Description of the equipment served by this stack or vent TANK F-496 EXTERNAL FLOATING ROOF	Diameter (ft) or stack discharge area (ft ²) 232.00 (ft ²)	Stack gas exit temperature (Deg F) N/A																																																																						
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A	Stack gas exit velocity (ft/sec) N/A																																																																						
Type of fuel used and heat input		Operating Characteristics																																																																							
Fuel	Type of fuel <input type="checkbox"/> N/A	Heat input (MMBtu/hr)	Percent of annual throughput of pollutants through this emission point																																																																						
		Dec-Feb Mar-Apr May-Jun Jun-Aug Sep-Nov	Normal operating time of this point																																																																						
		25	1879																																																																						
		25	13744884 Gal																																																																						
		25	Operating rate (Max) or tank capacity																																																																						
		25	751147 mE																																																																						
		25	3323461 mN																																																																						
Date of Submittal JULY 1999																																																																									
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Efficiency (%)</th> <th>Emission Rate</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL. LISTED)</td> <td>-</td> <td>0.00%</td> <td>4.31 (lb/hr)</td> <td>4.31 (lb/hr)</td> <td>0.09 (ton/yr)</td> <td>3</td> </tr> <tr> <td>BENZENE</td> <td>-</td> <td>0.00%</td> <td>0.02 (lb/hr)</td> <td>0.02 (lb/hr)</td> <td>0.09 (ton/yr)</td> <td>3</td> </tr> <tr> <td>ETHYLBENZENE</td> <td>-</td> <td>0.00%</td> <td>0.004 (lb/hr)</td> <td>0.004 (lb/hr)</td> <td>0.02 (ton/yr)</td> <td>3</td> </tr> <tr> <td>HEXANE (-N)</td> <td>-</td> <td>0.00%</td> <td>0.14 (lb/hr)</td> <td>0.14 (lb/hr)</td> <td>0.60 (ton/yr)</td> <td>3</td> </tr> <tr> <td>HYDROGEN SULFIDE</td> <td>-</td> <td>0.00%</td> <td>0.01 (lb/hr)</td> <td>0.01 (lb/hr)</td> <td>0.03 (ton/yr)</td> <td>3</td> </tr> <tr> <td>NAPHTHALENE</td> <td>-</td> <td>0.00%</td> <td><0.001 (lb/hr)</td> <td><0.001 (lb/hr)</td> <td><0.01 (ton/yr)</td> <td>3</td> </tr> <tr> <td>PAH (not otherwise listed)</td> <td>-</td> <td>0.00%</td> <td><0.001 (lb/hr)</td> <td><0.001 (lb/hr)</td> <td><0.01 (ton/yr)</td> <td>3</td> </tr> <tr> <td>TOLUENE</td> <td>-</td> <td>0.00%</td> <td>0.01 (lb/hr)</td> <td>0.01 (lb/hr)</td> <td>0.04 (ton/yr)</td> <td>3</td> </tr> <tr> <td>VINYENE (AND XD ISOMERS)</td> <td>-</td> <td>0.00%</td> <td>0.003 (lb/hr)</td> <td>0.003 (lb/hr)</td> <td>0.01 (ton/yr)</td> <td>3</td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL. LISTED)	-	0.00%	4.31 (lb/hr)	4.31 (lb/hr)	0.09 (ton/yr)	3	BENZENE	-	0.00%	0.02 (lb/hr)	0.02 (lb/hr)	0.09 (ton/yr)	3	ETHYLBENZENE	-	0.00%	0.004 (lb/hr)	0.004 (lb/hr)	0.02 (ton/yr)	3	HEXANE (-N)	-	0.00%	0.14 (lb/hr)	0.14 (lb/hr)	0.60 (ton/yr)	3	HYDROGEN SULFIDE	-	0.00%	0.01 (lb/hr)	0.01 (lb/hr)	0.03 (ton/yr)	3	NAPHTHALENE	-	0.00%	<0.001 (lb/hr)	<0.001 (lb/hr)	<0.01 (ton/yr)	3	PAH (not otherwise listed)	-	0.00%	<0.001 (lb/hr)	<0.001 (lb/hr)	<0.01 (ton/yr)	3	TOLUENE	-	0.00%	0.01 (lb/hr)	0.01 (lb/hr)	0.04 (ton/yr)	3	VINYENE (AND XD ISOMERS)	-	0.00%	0.003 (lb/hr)	0.003 (lb/hr)	0.01 (ton/yr)	3
Pollutant	Control Equipment Code	Control Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																			
TOTAL VOC (INCL. LISTED)	-	0.00%	4.31 (lb/hr)	4.31 (lb/hr)	0.09 (ton/yr)	3																																																																			
BENZENE	-	0.00%	0.02 (lb/hr)	0.02 (lb/hr)	0.09 (ton/yr)	3																																																																			
ETHYLBENZENE	-	0.00%	0.004 (lb/hr)	0.004 (lb/hr)	0.02 (ton/yr)	3																																																																			
HEXANE (-N)	-	0.00%	0.14 (lb/hr)	0.14 (lb/hr)	0.60 (ton/yr)	3																																																																			
HYDROGEN SULFIDE	-	0.00%	0.01 (lb/hr)	0.01 (lb/hr)	0.03 (ton/yr)	3																																																																			
NAPHTHALENE	-	0.00%	<0.001 (lb/hr)	<0.001 (lb/hr)	<0.01 (ton/yr)	3																																																																			
PAH (not otherwise listed)	-	0.00%	<0.001 (lb/hr)	<0.001 (lb/hr)	<0.01 (ton/yr)	3																																																																			
TOLUENE	-	0.00%	0.01 (lb/hr)	0.01 (lb/hr)	0.04 (ton/yr)	3																																																																			
VINYENE (AND XD ISOMERS)	-	0.00%	0.003 (lb/hr)	0.003 (lb/hr)	0.01 (ton/yr)	3																																																																			

This source was previously permitted in Part 70 Air Permit No. 2520-VI. This source is part of the OL-5 Feed Tank Product Group (Source ID 50035-07). Average (lb/hr), Maximum (lb/hr) and Annual (tons/yr) emission rates are based on the maximum pumping capacity of each individual tank.

Department of Environmental Quality
Air Quality Division
P.O. Box 44096
Baton Rouge, LA 70804
(225) 785-0102



LOUISIANA
SINGLE POINT/AREAL VOLUME SOURCE
Emission Inventory Questionnaire (EIQ)
for Air Pollutants

Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA			Date of Submittal JULY 1999																																																																																										
Source ID Number 1251-95	Descriptive name of the equipment served by this stack or vent TANK F-497 EXTERNAL FLOATING ROOF			Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 18																																																																																										
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) 40.00	Diameter (ft) or stack discharge area (ft ²) 232.00 (ft) (ft²)	Stack gas exit temperature (Deg F) N/A	Stack gas flow at process conditions, not at standard (ft ³ /min) N/A																																																																																										
Fuel	Operating Characteristics			Stack gas exit velocity (ft/sec) N/A																																																																																										
	Type of fuel a	Heat Input (MMBTU/hr) N/A	Percent of annual throughput of pollutants through this emission point Dec-Feb Mar-May Jun-Aug Sep-Nov 25 25 25 25	Normal operating time of this point hrs/day 538.00																																																																																										
			Normal operating time of this point wks/yr 52	Normal Operating Rate MMgal/yr 1374884 gal!																																																																																										
Air Pollutant Specific Information <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Average (lb/hr)</th> <th>Maximum (lb/hr)</th> <th>Annual (ton/yr)</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>-</td> <td>0.00%</td> <td>13.10</td> <td>13.10</td> <td>57.28</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>BENZENE</td> <td>-</td> <td>0.00%</td> <td>0.03</td> <td>0.03</td> <td>0.12</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>ETHYLBENZENE</td> <td>-</td> <td>0.00%</td> <td>0.02</td> <td>0.02</td> <td>0.08</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>HEXANE (-N)</td> <td>-</td> <td>0.00%</td> <td>0.33</td> <td>0.33</td> <td>1.45</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>HYDROGEN SULFIDE</td> <td>-</td> <td>0.00%</td> <td>0.03</td> <td>0.03</td> <td>0.13</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>NAPHTHALENE</td> <td>-</td> <td>0.00%</td> <td>0.002</td> <td>0.002</td> <td>0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>PAH (not otherwise listed)</td> <td>-</td> <td>0.00%</td> <td><0.001</td> <td><0.001</td> <td><0.01</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>TOLUENE</td> <td>-</td> <td>0.00%</td> <td>0.04</td> <td>0.04</td> <td>0.18</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>-</td> <td>0.00%</td> <td>0.01</td> <td>0.01</td> <td>0.06</td> <td>3</td> <td></td> <td></td> </tr> </tbody> </table>					Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lb/hr)	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	-	0.00%	13.10	13.10	57.28	3			BENZENE	-	0.00%	0.03	0.03	0.12	3			ETHYLBENZENE	-	0.00%	0.02	0.02	0.08	3			HEXANE (-N)	-	0.00%	0.33	0.33	1.45	3			HYDROGEN SULFIDE	-	0.00%	0.03	0.03	0.13	3			NAPHTHALENE	-	0.00%	0.002	0.002	0.01	3			PAH (not otherwise listed)	-	0.00%	<0.001	<0.001	<0.01	3			TOLUENE	-	0.00%	0.04	0.04	0.18	3			XYLENE (MIXED ISOMERS)	-	0.00%	0.01	0.01	0.06	3		
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average (lb/hr)	Maximum (lb/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																																																																						
TOTAL VOC (INCL LISTED)	-	0.00%	13.10	13.10	57.28	3																																																																																								
BENZENE	-	0.00%	0.03	0.03	0.12	3																																																																																								
ETHYLBENZENE	-	0.00%	0.02	0.02	0.08	3																																																																																								
HEXANE (-N)	-	0.00%	0.33	0.33	1.45	3																																																																																								
HYDROGEN SULFIDE	-	0.00%	0.03	0.03	0.13	3																																																																																								
NAPHTHALENE	-	0.00%	0.002	0.002	0.01	3																																																																																								
PAH (not otherwise listed)	-	0.00%	<0.001	<0.001	<0.01	3																																																																																								
TOLUENE	-	0.00%	0.04	0.04	0.18	3																																																																																								
XYLENE (MIXED ISOMERS)	-	0.00%	0.01	0.01	0.06	3																																																																																								

This source was previously permitted in Pan 70 Air Permit No. 2520-V0.
This source is part of the OL-5 Feed Tank Product Group (Source ID 5005-97). Average (lb/hr), Maximum (lb/hr) and Annual (ton/yr) emission rates are based on the maximum pumping capacity of each individual tank.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 44086
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA SINGLE POINT/AREA VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants																																																			
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA																																																		
Source ID Number 2-95	Descriptive name of the equipment served by this stack or vent ETHYLENE FURNACE, F-140 (OL-5)																																																		
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<table border="1"> <tr> <td>Height of stack (ft) above grade (ft)</td> <td>Diameter (ft) or stack discharge area (ft²)</td> <td>Stack gas exit temperature (Deg F)</td> <td>Stack gas flow at process conditions, not at standard (ft³/min)</td> <td>Slack gas exit velocity (ft/sec)</td> <td>Date of construction / modification</td> <td>Operating rate (Max) or tank capacity</td> </tr> <tr> <td>150.00</td> <td>7.17 (ft²)</td> <td>310</td> <td>87320</td> <td>38.04</td> <td>N/A</td> <td>334 MMBtu/hr</td> </tr> </table>	Height of stack (ft) above grade (ft)	Diameter (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)	Slack gas exit velocity (ft/sec)	Date of construction / modification	Operating rate (Max) or tank capacity	150.00	7.17 (ft ²)	310	87320	38.04	N/A	334 MMBtu/hr																																				
Height of stack (ft) above grade (ft)	Diameter (ft) or stack discharge area (ft ²)	Stack gas exit temperature (Deg F)	Stack gas flow at process conditions, not at standard (ft ³ /min)	Slack gas exit velocity (ft/sec)	Date of construction / modification	Operating rate (Max) or tank capacity																																													
150.00	7.17 (ft ²)	310	87320	38.04	N/A	334 MMBtu/hr																																													
Fuel a * See Note Below	<table border="1"> <tr> <th colspan="2">Type of fuel used and heat input</th> <th colspan="4">Operating Characteristics</th> <th colspan="4">Percent of annual throughput of pollutants through this emission point</th> <th colspan="4">Normal operating time of this point</th> <th colspan="4">Normal Operating Rate</th> </tr> <tr> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>hrs/day</th> <th>days/wk</th> <th>hrs/day</th> <th>days/wk</th> <th>hrs/day</th> <th>days/wk</th> <th>hrs/day</th> <th>days/wk</th> </tr> <tr> <td></td> <td>0.00</td> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> <td>52</td> <td>290.00</td> <td>MMBTu/hr</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Type of fuel used and heat input		Operating Characteristics				Percent of annual throughput of pollutants through this emission point				Normal operating time of this point				Normal Operating Rate				Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk		0.00	25	25	25	25	24	7	52	52	290.00	MMBTu/hr												
Type of fuel used and heat input		Operating Characteristics				Percent of annual throughput of pollutants through this emission point				Normal operating time of this point				Normal Operating Rate																																					
Type of fuel	Heat Input (MMBTU/hr)	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	hrs/day	days/wk	hrs/day	days/wk	hrs/day	days/wk	hrs/day	days/wk																																				
	0.00	25	25	25	25	24	7	52	52	290.00	MMBTu/hr																																								

Air Pollutant Specific Information	Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Average Emission Rate (lbs/hr)	Maximum Emission Rate (lbs/hr)	Annual Emission (tons/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
CARBON MONOXIDE	CO	000	0.00%	5.22	6.01	22.86	5		
NITROGEN OXIDES	NO	~	0.00%	29.00	33.40	127.02	5		
PARTICULATE MATTER	PM	000	0.00%	3.71	4.28	16.26	3		
SULFUR DIOXIDE	SO ₂	000	0.00%	4.01	4.62	17.58	3		
TOTAL VOC (INCL LISTED)	VOC	000	0.00%	0.41	0.47	1.79	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.

*Fuel Type/Maximum Heat Input: (a) OL-5 Process Gas - 334 MMBtu/hr (b) OL-5 Tail Gas - 334 MMBtu/hr (c) 50% Complex Fuel Gas Blend Drum, 50% OL-5 Tail Gas - 334 MMBtu/hr

**Equipped with low NOx burners having a performance of 0.10 lb/MMBtu.

Department of Environmental Quality
 Air Quality Division
 P.O. Box 40988
 Baton Rouge, LA 70804
 (225) 765-0102

LOUISIANA
SINGLE POINT/AREA/VOLUME SOURCE
 Emission Inventory Questionnaire (EIQ)
 for Air Pollutants

		Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA		Date of Submittal JULY 1999				
Company Name SHELL CHEMICAL LP		Descriptive name of the equipment served by this stack or vent FUGITIVE EMISSIONS - OL-5 Olefins Unit No. 5 (OL-5)		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 Horizontal Coordinate mE Vertical Coordinate mN				
Source ID Number 3007-95	Height of stack above grade (ft) 3.00	Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)	Slack gas exit temperature (Deg F) N/A	Slack gas flow at process conditions, not at standard (ft³/min) N/A	Slack gas exit velocity (ft/sec) N/A			
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Type of fuel used and heat input		Operating Characteristics	Percent of annual throughput of pollutants through this emission point				
	Type of fuel a	Heat Input (MMBTU/hr) N/A		Dec-Feb 25	Mar-May 25	Apr-Aug 25	Sep-Nov 25	Normal operating time of this point hrs/day 7
Air Pollutant Specific Information		Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code Concentration of gases exiting at stack		
TOTAL VOC (INCL. LISTED)	*	0.00%	151.98	161.86	685.60	3		
1,3-BUTADIENE	*	0.00%	0.69	0.99	4.32	3		
BENZENE	*	0.00%	0.77	0.77	3.40	3		
ETHYL BENZENE	*	0.00%	0.05	0.05	0.22	3		
HEXANE (-N)	*	0.00%	0.38	0.38	1.67	3		
HYDRAZINE	*	0.00%	0.07	0.07	0.30	3		
HYDROGEN SULFIDE	*	0.00%	0.04	0.04	0.17	3		
NAPHTHALENE	*	0.00%	0.58	0.58	2.50	3		
TOLUENE	*	0.00%	0.50	0.50	2.18	3		
XYLENE (MIXED ISOMERS)	*	0.00%	0.33	0.33	1.46	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
 *Leak Detection and Repair Program

<p>Department of Environmental Quality Air Quality Division P.O. Box 40086 Baton Rouge, LA 70804 (225) 765-0102</p>		<p>LOUISIANA SINGLE POINT/AERAVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>																																																		
		<p>Date of Submittal: JULY 1999</p>																																																		
<p>Company Name: SHELL CHEMICAL LP</p>		<p>Plant location and name (if any): NORCO CHEMICAL PLANT - EAST SITE NORCO, LA</p>																																																		
<p>Source ID Number: 3108-95</p>		<p>Descriptive name of the equipment served by this stack or vent: OIL WATER SEPARATOR OIL-5 CORRUGATED PLATE INTERCEPTOR</p>																																																		
<p>Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Height of stack above grade (ft) 3.00</p>	<p>Diameter (ft) or stack discharge area (ft²) N/A (ft) (ft²)</p>																																																	
		<p>Stack gas exit temperature (Deg F) 110</p>	<p>Stack gas flow at process conditions, not at standard (ft³/min) N/A</p>																																																	
		<p>Operating Characteristics</p> <table border="1"> <thead> <tr> <th>Fuel</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> <th>Type of fuel</th> <th>Heat Input (MMBTU/hr)</th> </tr> </thead> <tbody> <tr> <td>a</td> <td>N/A</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Fuel	Type of fuel	Heat Input (MMBTU/hr)	Type of fuel	Heat Input (MMBTU/hr)	a	N/A														<p>Stack gas exit velocity (ft/sec) N/A</p>																													
Fuel	Type of fuel	Heat Input (MMBTU/hr)	Type of fuel	Heat Input (MMBTU/hr)																																																
a	N/A																																																			
			<p>Percent of annual throughput of pollutants through this emission point</p> <table border="1"> <thead> <tr> <th>Dec-Feb</th> <th>Mar-May</th> <th>Jun-Aug</th> <th>Sep-Nov</th> <th>hrs/day</th> <th>days/wk</th> <th>wks/yr</th> </tr> </thead> <tbody> <tr> <td>25</td> <td>25</td> <td>25</td> <td>25</td> <td>24</td> <td>7</td> <td>52</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr	25	25	25	25	24	7	52																																			
Dec-Feb	Mar-May	Jun-Aug	Sep-Nov	hrs/day	days/wk	wks/yr																																														
25	25	25	25	24	7	52																																														
			<p>Normal operating time of this point</p> <table border="1"> <thead> <tr> <th>Normal Operating Rate</th> </tr> </thead> <tbody> <tr> <td>20.00 gpm</td> </tr> </tbody> </table>	Normal Operating Rate	20.00 gpm																																															
Normal Operating Rate																																																				
20.00 gpm																																																				
<p>Air Pollutant Specific Information</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Control Equipment Code</th> <th>Control Equipment Efficiency (%)</th> <th>Emission Rate</th> <th>Emission Estimation Method</th> <th>Add, Change, or Delete Code</th> <th>Concentration of gases exiting at stack</th> </tr> </thead> <tbody> <tr> <td>TOTAL VOC (INCL LISTED)</td> <td>000</td> <td>0.00%</td> <td>Average (lb/hr) 16.23</td> <td>Maximum (lb/hr) 16.23</td> <td>Annual (ton/yr) 71.08</td> <td>4</td> </tr> <tr> <td>BENZENE</td> <td>000</td> <td>0.00%</td> <td>0.01</td> <td>0.01</td> <td>0.02</td> <td>4</td> </tr> <tr> <td>ETHYLBENZENE</td> <td>000</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>4</td> </tr> <tr> <td>NAPHTHALENE</td> <td>000</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td><0.01</td> <td>4</td> </tr> <tr> <td>TOLUENE</td> <td>000</td> <td>0.00%</td> <td>0.01</td> <td>0.01</td> <td>0.02</td> <td>4</td> </tr> <tr> <td>XYLENE (MIXED ISOMERS)</td> <td>000</td> <td>0.00%</td> <td>0.001</td> <td>0.001</td> <td>0.01</td> <td>4</td> </tr> </tbody> </table>				Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack	TOTAL VOC (INCL LISTED)	000	0.00%	Average (lb/hr) 16.23	Maximum (lb/hr) 16.23	Annual (ton/yr) 71.08	4	BENZENE	000	0.00%	0.01	0.01	0.02	4	ETHYLBENZENE	000	0.00%	0.001	0.001	<0.01	4	NAPHTHALENE	000	0.00%	0.001	0.001	<0.01	4	TOLUENE	000	0.00%	0.01	0.01	0.02	4	XYLENE (MIXED ISOMERS)	000	0.00%	0.001	0.001	0.01	4
Pollutant	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack																																														
TOTAL VOC (INCL LISTED)	000	0.00%	Average (lb/hr) 16.23	Maximum (lb/hr) 16.23	Annual (ton/yr) 71.08	4																																														
BENZENE	000	0.00%	0.01	0.01	0.02	4																																														
ETHYLBENZENE	000	0.00%	0.001	0.001	<0.01	4																																														
NAPHTHALENE	000	0.00%	0.001	0.001	<0.01	4																																														
TOLUENE	000	0.00%	0.01	0.01	0.02	4																																														
XYLENE (MIXED ISOMERS)	000	0.00%	0.001	0.001	0.01	4																																														

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
 *Unit was constructed in 1977 prior to the May 4, 1987 NSPS, Subpart QQ applicability date and has not been modified or reconstructed since construction.

 <p>LOUISIANA SINGLE POINT/AEROVOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants</p>		<p>Date of Submittal JULY 1989</p>	
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO CHEMICAL PLANT - EAST SITE NORCO, LA	Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 Horizontal Coordinate 751016 mE <input type="checkbox"/> 16 Vertical Coordinate 3321628 mN	
Source ID Number 3109-95	Descriptive name of the equipment served by this stack or vent OIL WATER SEPARATOR OL-5 CORRUGATED PLATE INTERCEPTOR	Stack gas exit temperature (Deg F) N/A (F) (F ^o 2)	Stack gas flow at process conditions, not at standard (F ^o /3 mils) N/A
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit velocity (ft/sec) N/A	Stack gas exit velocity (ft/sec) N/A
Type of fuel used and heat input Fuel Type of fuel Heat Input (MMBTU/hr)		Operating Characteristics Dec-Feb: Mar-May: Jun-Aug: Sep-Nov: hrs/day 25 25 25 25 24 7 52 days/wk 20.00 20.00 20.00 20.00 20.00 20.00 20.00	
Air Pollutant Specific Information Pollutant Control Equipment Code Control Equipment Efficiency (%) Emission Rate Annual Maximum (lbs/hr) Annual (ton/yr)			
TOTAL VOC (INCL LISTED)	000	0.00%	13.19 57.83
BENZENE	000	0.00%	0.004 0.02
ETHYLBENZENE	000	0.00%	0.001 <0.01
NAPHTHALENE	000	0.00%	0.001 <0.01
TOLUENE	000	0.00%	0.004 0.02
XYLENE (MIXED ISOMERS)	000	0.00%	0.001 0.01

*This source was previously permitted in Part 70 Air Permit No. 2520-V0.
*Unit was constructed in 1977 prior to the May 4, 1987 NSPS. Subpart QQ applicability date and has not been modified or reconstructed since construction.

Department of Environmental Quality Air Quality Division P.O. Box 44096 Baton Rouge, LA 70804 (225) 765-0102		 LOUISIANA SINGLE POINT/AREA/VOLUME SOURCE Emission Inventory Questionnaire (EIQ) for Air Pollutants						
Company Name SHELL CHEMICAL LP	Plant location and name (if any) NORCO, LA.							
Date of Submittal JULY 1999								
Source ID Number 3207-95	Descriptive name of the equipment served by this stack or vent OL-5 UNIT WASTEWATER EMISSIONS		Location of stack or vent UTM Zone No. <input checked="" type="checkbox"/> 15 <input type="checkbox"/> 16					
Stack and Discharge Physical Characteristics Change <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Height of stack above grade (ft) N/A	Diameter (ft) or stack discharge area (ft ²) N/A (ft) (ft ²)	Stack gas exit temperature (Deg F) N/A					
Fuel	Type of fuel N/A	Type of heat input Heat Input (MMBTU/hr)	Operating Characteristics Dec-Feb Mar-Apr May Jun-Aug Sep-Nov					
a				Percent of annual throughput of pollutants through this emission point hrs/day days/wk yrs/yr				
Air Pollutant Specific Information	Control Equipment Code	Control Equipment Efficiency (%)	Emission Rate Average (lbs/hr)	Maximum (lbs/hr)	Annual (ton/yr)	Emission Estimation Method	Add, Change, or Delete Code	Concentration of gases exiting at stack
TOTAL VOC (INCL. LISTED)	000	0.00%	34.72	34.71	152.08	3		
BENZENE	000	0.00%	0.02	0.02	0.10	3		
ETHYLBENZENE	000	0.00%	0.03	0.03	0.14	3		
NAPHTHALENE	000	0.00%	0.004	0.004	0.02	3		
TOLUENE	000	0.00%	0.63	0.63	2.77	3		
XYLENE (MIXED ISOMERS)	000	0.00%	0.43	0.43	1.89	3		

This source was previously permitted in Part 70 Air Permit No. 2520-V0.
*Unit was constructed in 1977 prior to the May 4, 1987 NSPS. Subpart QQ applicability date and has not been modified or reconstructed since construction.

**State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants**

Date of Submission

February 2009

**Emission Point ID No.
(Alternate ID)**

5005-97

Descriptive Name of the Emissions Source (Alt. Name)

OL-S FEED TANK GROUP PRODUCT LIMIT

Approximate Location of Stack or Vent (see instructions)

Method	UTM Zone	15	Horizontal	mi	Vertical	miN
Latitude		"		"		hundredths
Longitude		"		"		hundredths
Stack Gas Exit Conditions, not at Standard (ft/min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point		
Stack Gas Exit Velocity (ft/sec)	Stack Gas Exit Velocity (ft/sec)	Normal Operating Time (hours per year)	Construction or Modification	Jan-Mar	Apr-Jun	Jul-Oct
ft	ft	hr/yr		Mar	Jun	Sep
No	ft ²	ft/sec		Dec		
		ft^3/min				
		°F				
		0				

Type of Fuel Used and Heat Input (see instructions)
Heat Input (MMBTU/hr)

N/A

Operating Parameters (include units)
Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Floating Roof
External

Internal

Description	Add, Change, Delete, or Unchanged	Continuous Compliance Method	Concentration of gases exiting at stack
Permitted Emission Rate (Current)			
Annual (tons/yr)			
Max (lbs/hr)			
Average (lbs/hr)			

Notes

Emissions reflected on this EIQ sheet represent the total OL-S Tank Group Product Limit (FPNs 1061-94, 1211-95, 1212-95, 1213-95, 1250-95, and 1251-95). May contain trace levels of MTBE and H2S. **Normal Operating Rate by Product: Full Range Crude Feedstock 120 F - 3084.14 mbbls/yr; Diesel Feedstock 120 F - 30964.17 mbbls/yr; Diesel/Condensate Mix Feedstock 120 F - 30153.95; HAGO Feedstock 120F - 30151.56 mbbls/yr.

Air Pollutant Specific Information

Emission Point ID No. (Alternate ID)

5005-97

Pollutant	Control Equipment Code	HAP/TAP CAS Number	Proposed Emission Rates
TOTAL VOC (INCL. LISTED)	000	0.00%	Average (lbs/hr)
1,3-BUTADIENE	000	0.00%	Max (lbs/hr)
1-METHYLNAPHTHALENE	000	0.00%	Annual (tons/yr)
2,2,4-TRIMETHYLPENTANE	000	0.00%	
2-METHYLNAPHTHALENE	000	0.00%	
BENZENE	000	0.00%	
CUMENE	000	0.00%	
ETHYLBENZENE	000	0.00%	
HEXANE (-N)	000	0.00%	
HYDROGEN SULFIDE	000	0.00%	
NAPHTHALENE	000	0.00%	
PAH (not otherwise listed)	000	0.00%	
STYRENE	000	0.00%	

**State of Louisiana
Emissions Inventory Questionnaire (EIQ) for Air Pollutants**

Date of Submission
February 2009

Approximate Location of Stack or Vent (see instructions)

Emission Point ID No.
(Alternate ID)
5005-97

Descriptive Name of the Emissions Source (Alt. Name)
OL-5 FEED TANK GROUP PRODUCT LIMIT

Tempo Subject Item ID No.
1213-95

Stack and Discharge Physical Characteristics Change? (yes or no)	Diameter (ft) or Stack Discharge Area (ft ²)	Height of Stack Above grade (ft)	Stack Gas Exit Velocity	Stack Gas Flow at Condition, not at Standard (ft ³ /min)	Stack Gas Exit Temperature (°F)	Normal Operating Time (hours per year)	Date of Construction or Modification	Percent of Annual Throughput Through This Emission Point	Datum	mN				
No	ft	ft	ft/sec	ft ³ /min	°F	hr/yr	Mar	Apr	May	Jun	Jul	Oct	Nov	Dec
No														

Type of Fuel Used and Heat Input (see instructions)

Heat Input (MMBTU/hr)
Type of Fuel
N/A

Description

Operating Parameters (include units)

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

Floating Roof

Percent of Annual Throughput Through This Emission Point

Parameter

Normal Operating Rate/Throughput
Maximum Operating Rate/Throughput
Design Capacity/Volume
Shell Height (ft)
Tank Diameter (ft)

Fixed Roof

External
Internal

Emission Point ID No. (Alternate ID)	Control Equipment Code	Control Equipment Efficiency	HAP/TAP CAS Number	Proposed Emission Rates		Permitted Emission Rate (Current)	Annual (tons/yr)	Continuous Compliance Method	Add, Delete, or Unchanged	Change	Change	Change	Concentration of gases exiting at stack
				Average (lb/hr)	Max (lb/hr)								
5005-97	000	0.00%	108-88-3	0.15	0.66	0.85	0.35						0
	000	0.00%	130-20-7	0.06	0.27								0

Air Pollutant Specific Information

Pollutant

TOLUENE

XYLENE (MIXED ISOMERS)

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point	PM ₁₀	SO ₂	NO _x	CO	VOC*	OTHER**
1003-95	-	-	-	-	0.31	-
1101-95	-	-	-	-	-	0.07
1200-95	-	-	-	-	0.22	-
1201-95	-	-	-	-	0.19	-
2005-95	18.24	-	-	-	25.75	-
3001-95	-	-	-	-	35.92	0.08
3204-95	-	-	-	-	50.74	-
1001-95	-	-	-	-	4.27	-
1002-95	-	-	-	-	1.88	-
1005-95	-	-	-	-	0.67	-
1252-95	-	-	-	-	6.00	-
3-95	-	-	-	-	12.43	-
3005-95	-	-	-	-	134.74	0.01
3205-95	-	-	-	-	22.54	-
5-95	-	-	-	-	13.36	-
1-73	10.69	22.56	158.12	33.37	1.87	-
2-73	10.69	22.56	158.12	33.37	1.87	-
3-73	10.69	22.56	158.12	33.37	1.87	-
4-73	10.69	22.56	158.12	33.37	1.87	-
5-73	16.93	11.19	357.95	52.97	1.87	-
6-73	15.08	9.97	475.49	35.63	1.66	-
7-73	15.08	9.97	475.49	35.63	2.55	-
8-73	15.08	9.97	475.49	35.63	2.55	-
9-73	15.08	9.97	475.49	35.63	2.55	-
1008-95	-	-	-	-	0.03	-

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point	PM ₁₀	SO ₂	NO _x	CO	VOC*	OTHER**
Permitted emission rates are listed in tons per year						
1018-95	-	-	-	-	0.05	-
1052-95	-	-	-	-	0.05	-
1076-95	-	-	-	-	<0.01	-
1077-95	-	-	-	-	<0.01	-
1090-95	-	-	-	-	0.24	-
1099-95	-	-	-	-	-	0.05
1105-95	-	-	-	-	-	0.01
1264-95	-	-	-	-	2.46	-
2003-95	5.21	-	-	-	7.36	0.01
2004-95	8.17	-	-	-	11.54	-
3006-95	-	-	-	-	375.50	0.06
3110-95	-	-	-	-	42.92	-
3206-95	-	-	-	-	129.24	-
1-96	-	-	-	-	<0.01	-
5004-97	18.54	55.47	115.63	20.32	2.74	-
7-76	18.45	19.95	344.71	32.87	2.03	-
9-76	18.45	19.95	344.71	32.87	2.03	-
10-76	18.45	19.95	344.71	32.87	2.03	-
11-76	18.45	19.95	574.14	45.56	2.03	-
12-76	18.45	19.95	574.14	45.56	2.03	-
13-76	18.45	19.95	574.14	45.56	2.03	-
14-76	18.45	19.95	574.14	45.56	2.03	-
15-76	18.45	19.95	574.14	45.56	2.03	-
16-76	18.45	19.95	574.14	45.56	2.03	-
17-76	18.45	19.95	574.14	45.56	2.03	-

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Emission Point	PM ₁₀	SO ₂	NO _x	CO	VOC*	OTHER**
18-76	18.45	19.95	574.14	45.56	2.03	-
19-76	18.45	19.95	574.14	45.56	2.03	-
20-76	18.45	19.95	574.14	45.56	2.03	-
6-84	2.90	0.01	15.79	9.29	175.32	-
7-84	2.90	0.01	15.79	9.29	175.32	-
1001-94#	-	-	-	-	CAP	CAP
1012-95	-	-	-	-	<0.01	-
1032-95	-	-	-	-	<0.01	-
1033-95	-	-	-	-	0.03	-
1039-95	-	-	-	-	<0.01	<0.01
1055-95	-	-	-	-	11.43	0.03
1060-95	-	-	-	-	0.04	-
1061-95	-	-	-	-	8.55	-
1062-95	-	-	-	-	8.93	-
1063-95	-	-	-	-	8.93	-
1064-95	-	-	-	-	0.24	-
1065-95	-	-	-	-	0.24	-
1066-95	-	-	-	-	0.22	-
1078-95	-	-	-	-	<0.01	-
1084-95	-	-	-	-	1.42	-
1085-95	-	-	-	-	1.42	-
1093-95	-	-	-	-	3.00	0.02
1250-95#	-	-	-	-	CAP	CAP
1251-95#	-	-	-	-	CAP	CAP
2-95	16.26	17.58	127.02	22.86	1.79	-

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

Permitted emission rates are listed in tons per year						
Emission Point	PM ₁₀	SO ₂	NO _X	CO	VOC*	OTHER**
3007-95	-	-	-	-	665.60	0.47
3108-95	-	-	-	-	71.08	-
3109-95	-	-	-	-	57.83	-
3207-95	-	-	-	-	152.08	-
1211-95	-	-	-	-	15.53	-
1212-95	-	-	-	-	17.37	-
1243-95	-	-	-	-	9.07	-
1244-95	-	-	-	-	6.10	-
5005-97	-	-	-	-	101.18	0.65
Totals	432.08	473.73	9,942.15	945.35	2,418.81	1.62

Emissions from these tanks shall be reported under a cap, 5005-97.

Note: Total emissions include 5005-97. Individual tanks under the cap may emit maximum lb/hr listed in the EIQ sheets, but the sum of the emissions from these tanks shall not exceed the cap listed in 5005-97. Individual tank emissions are not included in the Totals.

The below table summarizes the individual changes and the total change in VOC emissions in TPY associated with this permit action.

Source	PTE Before	PTE After	Change
5005 CAP	396.56	101.18	-295.38
Tank F-494	20.100	6.097	-14.003
Tank F-498	0	15.528	+15.528 (PTE before accounted for within the cap)
Tank F-500	0	17.366	+17.366 (PTE before accounted for within the cap)
Tank F-483	4.620	9.072	+4.452
Tank F-433	6.03	0	-6.03
Tank F-501	0	0	+0 (PTE Before and Change accounted for within the cap)
Total VOC Change	427.31	149.243	-278.06

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

<u>LAC 33:III.CHAPTER 51</u>	<u>Tons per year</u>
<u>REGULATED VOCs</u>	
1,3-Butadiene	28.40
Acetonitrile	4.77
Benzene	64.82
Cumene	<0.01
Ethylbenzene	2.37
Hydrazine	0.30
n-Hexane	10.20
Methanol	1.28
Naphthalene	6.86 (includes methylnaphthalenes)
Phenol	<0.01
Styrene	0.81
Toluene	24.66
Xylene	11.00
TOTAL	155.47

**OTHER speciation in tons per year:

Ammonia	0.12
Hydrogen sulfide	0.92
Sulfuric acid	0.13
Hydrazine	0.30

ANNUAL EMISSION RATES

**BUTADIENE RECOVERY PLANT, GASOLINE HYDROTREATER, GASOLINE
OLEFINS PLANT, AND OLEFINS PLANT
SHELL NORCO CHEMICAL PLANT-EAST SITE
SHELL OIL COMPANY
NORCO, ST. CHARLES PARISH, LOUISIANA**

GENERAL CONDITION XVII

Emission Permitted emission rates are listed in tons per year Point

	PM ₁₀	SO ₂	NO _X	CO	VOC+	OTHER
1	-	-	-	-	0.08	-
2	-	-	-	-	0.04	-
3	-	-	-	-	0.02	-
4	-	-	-	-	0.02	-
5	-	-	-	-	0.001	-
6	-	-	-	-	0.001	-
7	-	-	-	-	0.001	-
8	-	-	-	-	0.05	-
9	-	-	-	-	0.05	-